

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Misuse of Internet Protocol (IP) Captioned) CG Docket No. 13-24
Telephone Service)
)
Telecommunications Relay Services and Speech-) CG Docket No. 03-123
to-Speech Services for Individuals with Hearing)
and Speech Disabilities)

REPORT AND ORDER, DECLARATORY RULING, FURTHER NOTICE OF PROPOSED
RULEMAKING, AND NOTICE OF INQUIRY

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By the Commission: Chairman Pai and Commissioner Carr issuing separate statements; Commissioner
O’Rielly approving in part and concurring in part and issuing a statement; Commissioner Rosenworcel
concurring and issuing a statement.

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I. INTRODUCTION

1. This proceeding adopts measures and proposes others to ensure that Internet Protocol Captioned Telephone Service (IP CTS) remains sustainable for those individuals who need it. IP CTS is a form of telecommunications relay services (TRS) that allows individuals with hearing loss to both read captions and use their residual hearing to understand a telephone conversation.¹ In recent years, use of IP CTS—which is paid for entirely through the Federal Communication Commission’s (FCC’s or Commission’s) Interstate TRS Fund (TRS Fund or Fund)—has grown exponentially. As a result, this form of TRS now represents almost 80 percent of the total minutes compensated by the Fund—at a cost of nearly one billion dollars. As IP CTS usage continues to grow and the contribution base supporting the TRS Fund shrinks, potential waste in this program poses an ever-increasing threat to the sustainability of

¹ This item addresses issues on which the Commission sought comment in a 2013 further notice of proposed rulemaking in this proceeding. *Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 13420, 13472-89, paras. 111-53 (2013) (cited herein as *2013 IP CTS Reform Order* when referencing the Report and Order, and as *2013 IP CTS Reform FNPRM* when referencing the Further Notice of Proposed Rulemaking), *vacated in part, Sorenson Communications, Inc. and CaptionCall, LLC v. FCC*, 755 F.3d 702, 710 (D.C. Cir. 2014) (*Sorenson*).

IP CTS and all forms of TRS. We therefore take steps and explore others to reduce waste of the TRS Fund and expand the Fund's contribution base, to ensure the continued viability of IP CTS for people with hearing loss who need it. In the Report and Order and Declaratory Ruling, we adopt interim IP CTS compensation rates that will save the TRS Fund at least \$399 million over two years, adopt rules to limit unnecessary IP CTS use, and approve use of speech-to-text automation to generate IP CTS captions, thereby taking advantage of technological advances to modernize IP CTS while achieving greater efficiencies.

2. In the Further Notice of Proposed Rulemaking (Further Notice), we explore how best to fund, administer, and determine user eligibility for this service. We consider, among other issues, the role that state programs and intrastate carriers can play in the provision of and support for IP CTS. We also seek comment on the use of independent third-party hearing health professionals to perform IP CTS user eligibility assessments and consider ways to curb provider practices that could be incenting use of IP CTS by people who may not need it. Finally, in the Notice of Inquiry, we seek comment on IP CTS performance goals and metrics to ensure service quality for users.

II. BACKGROUND

A. IP CTS from Its Inception Until Now

3. Section 225 of the Communications Act of 1934, as amended (the Act) requires the Commission to ensure the provision of TRS for persons who are deaf, hard of hearing, deaf-blind, or have speech disabilities that is functionally equivalent to the provision of voice communication services used by persons without disabilities "to the extent possible and in the most efficient manner."² IP CTS is a form of TRS "that permits an individual who can speak but who has difficulty hearing over the telephone to use a telephone and an Internet Protocol-enabled device via the Internet to simultaneously listen to the other party and read captions of what the other party is saying."³ Generally, IP CTS employs two network paths: a connection via the public switched telephone network (PSTN) or a Voice over Internet Protocol (VoIP) service for the voice conversation between the parties to the call, and a separate Internet connection that transmits the other party's voice from the IP CTS user's phone to a communications assistant (CA) and transmits captions from the CA back to the IP CTS user.⁴

4. When an IP CTS user places or receives a call, he or she is automatically connected to a CA at the same time that the parties to the call are connected. In the most widely used version of IP CTS, the CA then re-voices everything the hearing party says into a speech recognition program, which automatically transcribes the words into captions.⁵ In a second version, the CA uses stenography to produce the captions, typing the speech content directly into captions.⁶ Today, five providers have

² 47 U.S.C. § 225(a)(3), (b)(1).

³ 47 CFR § 64.601(a)(17). Captions may be displayed on a specialized IP CTS device or an off-the-shelf computer, tablet, or smartphone. The Commission approved IP CTS as a type of TRS eligible for compensation from the TRS Fund in 2007. *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Internet-based Captioned Telephone Service*, Declaratory Ruling, 22 FCC Rcd 379, 379, para. 1 (2007) (*2007 IP CTS Declaratory Ruling*). Currently, the cost of IP CTS is supported entirely by the TRS Fund. In 2003, the Commission approved a non-IP version of this service, called CTS, which is made available through state TRS programs and is supported jointly by the states and the TRS Fund. *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling, 18 FCC Rcd 16121, 16121, para. 1 (2003) (*2003 CTS Declaratory Ruling*).

⁴ *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 385, para. 14; 47 CFR § 64.601(a)(17).

⁵ *2013 IP CTS Reform Order*, 28 FCC Rcd at 13422, para. 6.

⁶ See *Notice of Conditional Grant of Application of Miracom USA, Inc., for Certification as a Provider of Internet Protocol Captioned Telephone Service Eligible for Compensation from the Telecommunications Relay Services*

certification from the Commission to provide IP CTS: Hamilton Relay, Inc.; CaptionCall, LLC (a wholly owned subsidiary of Sorenson Communications, Inc.); Sprint Corporation; ClearCaptions, LLC; and Mezmo Corporation, d/b/a InnoCaption. All IP CTS minutes are compensated from the TRS Fund, and, like other forms of Internet-based TRS, IP CTS is entirely administered by the Commission.

5. In January 2013, in response to unusually heightened growth in the use of IP CTS over the prior year, the Commission adopted several interim measures designed to ensure the use of this service only by people with hearing loss who need it to communicate in a functionally equivalent manner.⁷ In August 2013, the Commission adopted additional rules, including (1) prohibitions against referrals-for-rewards programs and other incentives for the use of IP CTS;⁸ (2) requirements for self-certification by IP CTS users;⁹ (3) labeling requirements to prevent misuse of IP CTS devices by ineligible users;¹⁰ (4) a requirement for captions to be defaulted to “off,” so that users would need to take an affirmative step to turn on the service before each use (Default-Off Rule);¹¹ and (5) a rule prohibiting distribution of IP CTS devices for less than \$75 (\$75 Equipment Charge Rule).¹²

6. In June 2014, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated the *2013 IP CTS Interim Order* in its entirety, holding that the interim rules did not qualify for the “good cause” exception to the requirement of notice and opportunity for comment under the Administrative Procedure Act.¹³ In addition, the D.C. Circuit vacated the Default-Off Rule and the \$75 Equipment Charge Rule contained in the *2013 IP CTS Reform Order*.¹⁴ However, still effective in the Commission’s rules are prohibitions against provider incentives;¹⁵ requirements for IP CTS users to register with an IP CTS provider and to self-certify their need for IP CTS and their understanding of the program;¹⁶ a corresponding mandate for providers to retain records of such registration and certification;¹⁷ and requirements for devices distributed by IP CTS providers to have both an easy means of activating

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Fund, Public Notice, 29 FCC Rcd 5105, 5106 (CGB 2014) (*Miracom Conditional Certification*). At present, this form of IP CTS is accessed only by registered users through mobile devices.

⁷ See *Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order and Notice of Proposed Rulemaking, 28 FCC Rcd 703, 706, 710-13, 718-19, 722, 724, paras. 6, 13-14, 24, 33, 37 (2013) (cited herein as *2013 IP CTS Interim Order* when referencing the Order and as *2013 IP CTS Initial NPRM* when referencing the Notice of Proposed Rulemaking), *vacated*, *Sorenson*, 755 F.3d at 705-07.

⁸ *2013 IP CTS Reform Order*, 28 FCC Rcd at 13430-35, paras. 19-29.

⁹ *Id.* at 13449-50, 13452-55, paras. 64-65, 69-73.

¹⁰ *Id.* at 13460-61, paras. 87-90.

¹¹ *Id.* at 13464-65, paras. 96-97.

¹² *Id.* at 13440-48, paras. 41-59. The \$75 Equipment Charge Rule did not apply to IP CTS devices offered by a state or local government equipment distribution program. *Id.* at 13437, para. 35.

¹³ *Sorenson*, 755 F.3d at 705-07.

¹⁴ *Id.* at 707-10.

¹⁵ IP CTS providers may not offer direct or indirect financial or other incentives to potential users to register for IP CTS, or to hearing health professionals if the incentives are tied to a consumer’s decision to register for IP CTS. In addition, joint marketing arrangements between IP CTS providers and hearing health professionals are prohibited. 47 CFR § 64.604(c)(8).

¹⁶ *Id.* § 64.604(c)(9)(i)-(iii), (11)(ii).

¹⁷ *Id.* § 64.604(c)(9)(x).

captions and a label warning against unauthorized use.¹⁸

B. The Need for IP CTS Reform

7. *Reducing Incentives and Practices Contributing to Waste and Abuse.* Section 225 of the Act requires us to ensure that TRS is made available “to the extent possible and in the most efficient manner.”¹⁹ As the Commission has done for other forms of Internet-based TRS,²⁰ this item takes initial steps and asks about others needed to transform the structure and support of IP CTS to make this service more efficient and effective.²¹ We take these steps in response to incentives that appear likely to cause excessive waste in the IP CTS program—in part resulting from questionable provider practices.

8. While most other forms of TRS have exhibited either declining demand (i.e., TTY-based TRS, state-based CTS, IP Relay)²² or relatively flat demand (i.e., video relay service (VRS)) over the past few years,²³ IP CTS growth has been exponential in recent years. From 2011 to 2017, annual IP CTS minutes have grown from approximately 29 million to 363 million.²⁴ According to the TRS Fund administrator, in 2018-19, IP CTS will represent approximately 78 percent of the total minutes of TRS

¹⁸ *Id.* § 64.604(c)(10), (11)(iii).

¹⁹ 47 U.S.C. § 225(b)(1).

²⁰ See *Structures and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 5545 (2011) (*2011 Fraud Order*) (adopting measures to prevent waste, fraud, and abuse in video relay services (VRS), including prohibitions against the use of privacy screens, limitations on calls originating from outside the U.S. to pre-registered users, and call detail reporting requirements to confirm the identity of VRS callers and that the provider is in fact entitled to compensation for the call); *Structure and Practices of the Video Relay Service Program*, Second Report and Order and Order, 26 FCC Rcd 10898 (2011) (adopting strengthened certification requirements for VRS providers); *Structure and Practices of the Video Relay Service Program, Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8647-56, paras. 62-86 (2013) (*2013 VRS Reform Order*), *aff'd in relevant part, Sorenson Communications, Inc. v. FCC*, 765 F.3d 37 (D.C. Cir. 2014) (*Sorenson 2014*) (establishing a centralized database to verify the identity and validate the eligibility of VRS users).

²¹ 47 U.S.C. § 225(b)(1).

²² With TTY-based TRS, a caller uses a text telephone (TTY) to call a TRS center whose CA, in turn, places an outbound voice call to the called party. *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5142, para. 2 (2000). “State-based CTS” refers to the non-IP version of CTS that is provided by an FCC-certified state program. See 47 U.S.C. § 225(f)(2). IP Relay permits telephone communication “in text using an Internet Protocol-enabled device via the Internet, rather than using a text telephone (TTY) and the public switched telephone network.” 47 CFR § 64.601(a)(18).

²³ VRS is “[a] telecommunications relay service that allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment. The video link allows the CA to view and interpret the party's signed conversation and relay the conversation back and forth with a voice caller.” 47 CFR § 64.601(a)(43).

²⁴ See *infra* Table 1. IP CTS growth began to accelerate in the 2012-13 Fund Year, when the number of IP CTS minutes of use considerably exceeded provider projections and caused the TRS Fund administrator to narrowly avert having insufficient funds to compensate TRS providers. See *2013 IP CTS Interim Order*, 28 FCC Rcd at 706, para. 6. The TRS Fund Year begins on July 1 of each year and runs through June 30 of the following year. The monthly minutes of use for IP CTS grew from about 6 million in July 2012 to about 10 million in March 2013. This growth pattern was temporarily interrupted when the Commission adopted interim restrictions on provider practices in marketing IP CTS. In 2014, after the court stayed and eventually reversed some of the 2013 rules, the accelerated IP CTS growth pattern resumed. Rolka Loube, *Interstate TRS Fund Payment Formula and Fund Size Estimate*, CG Docket Nos. 03-123 and 10-51, at 34 (filed May 4, 2018) https://ecfsapi.fcc.gov/file/10504679513627/2018%20TRS%20Fund%20Annual%20Report_5-4-18.pdf (2018 TRS Rate Report).

compensated by the TRS Fund and about 66 percent of total TRS Fund payments to TRS providers.²⁵ For Fund Year 2018-19, the TRS Fund administrator has estimated that a total of \$999 million will be paid from the TRS Fund to IP CTS providers.²⁶ At the same time, the end-user telecommunication revenue base from which IP CTS and other forms of TRS are supported is steadily declining, raising the threat that over the long term, ever-increasing levels of contribution may not be sustainable.²⁷ In fact, the TRS Fund contribution base has decreased from about \$79 billion in 2008 to about \$53 billion in 2018.²⁸

9. One reason for greater usage of IP CTS over other forms of TRS may be the ease and convenience of using IP CTS, including the absence of direct interaction between the parties to the call and the CA. For example, during an IP CTS call, the presence of a CA is not announced to the hearing party, and communication with the CA by the person who has hearing loss takes place in only one direction.²⁹ While such ease and convenience facilitate use of the service by people with hearing loss who need it for effective communication, these characteristics also create a risk that IP CTS will be used even when it is not needed. In other words, because an IP CTS call can progress much in the same way as an ordinary voice telephone conversation,³⁰ consumers may be less likely to “self-screen” in choosing whether to use the service. As the Commission explained in 2013, “[b]ecause of the ease and convenience of using IP CTS devices, which function much the same as a conventional telephone but for the addition of captions, once the device is in a consumer’s possession, consumers may routinely use the device with captions . . . even if they do not actually need the service for effective communication.”³¹ In fact, according to state equipment distribution programs (EDPs) with experience in assessing the need for specialized communications devices, only a portion of individuals who use—or could benefit from using—hearing aids are likely to require IP CTS to achieve effective communication.³² Many other individuals with hearing loss are likely to be able to communicate effectively by phone through the use of hearing-aid compatible handsets, Bluetooth devices, or specialized devices such as enhanced-amplification (also called “high-gain”) telephones.³³

10. We are further concerned that a large portion of the recent growth in IP CTS may be attributable to perverse incentives for providers to market this service to individuals who do not need it and the consequent wasteful use of IP CTS by individuals who could derive equal or greater benefit from less costly alternatives, such as high-amplification phones. Because IP CTS providers are paid on a per-minute basis, there appears to be no incentive to ensure accurate and objective assessments of each consumer’s need for this service over alternatives for more cost-efficient and effective telephone communication. Rather, to encourage as many individuals as possible to sign up and use IP CTS, providers engage in a number of marketing practices that likely contribute to waste in the IP CTS

²⁵ 2018 TRS Rate Report at 20, Exh. 2.

²⁶ *Id.* at 20.

²⁷ *Id.* at 10-11.

²⁸ *Id.*

²⁹ *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 389, para. 23; *2013 IP CTS Interim Order*, 28 FCC Rcd at 716, para. 20.

³⁰ *2013 IP CTS Interim Order*, 28 FCC Rcd at 716, para. 20 & n.61.

³¹ *2013 IP CTS Reform Order*, 28 FCC Rcd at 13440, para. 42; *see also id.* (“In fact, when using the phone, the unobtrusive nature of IP CTS is such that consumers may not even be aware that captions are turned on or that they have the ability to turn them off.”).

³² *See, e.g.*, Letter from Telecommunications Equipment Distribution Program Association (TEDPA), to FCC, CG Docket No. 13-24, at 1-2 (filed Mar. 24, 2015) (TEDPA Mar. 2015 *Ex Parte*).

³³ *See* Letter from James Forstall, Chair, TEDPA, to Karen Peltz Strauss, Deputy Bureau Chief, Consumer and Governmental Affairs Bureau, FCC, CG Docket No. 13-24 (filed Oct. 2, 2017) (TEDPA Oct. 2017 *Ex Parte*) (noting agreement among states that most people requesting a CTS phone end up with alternative technologies when assisted by EDP staff).

program. These include (1) touting the usefulness of IP CTS to anyone with hearing loss—regardless of their level of hearing loss or need for captioning (over other types of assistive or auxiliary devices);³⁴ (2) linking together amplification and captioning features on IP CTS devices, which causes waste (e.g., when the phone is used by others in a household who may not need captions);³⁵ (3) failing to effectively assess each individual’s need for IP CTS through neutral and independent third-party evaluations before permitting use of the service;³⁶ (4) engaging in pre-established and sometimes exclusive or joint arrangements with third-party professionals that compromise the objectivity of such assessments;³⁷ and (5) routinely giving out free IP CTS devices with features, such as added amplification and the ability to create a transcript of the call, that make these products attractive to consumers who may not need captions for functionally equivalent telephone communication.³⁸

11. Because these practices—combined with the inherent ease and convenience of IP CTS—encourage unnecessary usage of this service and waste to the TRS Fund, we find it critical to take action. In this regard, it is our goal to adopt measures that will first, eliminate provider practices that are designed to promote IP CTS by individuals who do not need this service; second, reduce the underlying incentives contributing to such practices—so that they do not re-surface in other forms; and third, ensure that this service remains sustainable for those who actually need it. To this end, in the Report and Order we adopt measures, and in the Further Notice propose others, to (1) replace the current IP CTS rate methodology (and associated rate) with a fair and efficient compensation approach; (2) move the IP CTS provider compensation rate closer to reasonable cost; (3) expand the IP CTS contribution base; and (4) reduce the risk of providers signing up ineligible customers and encouraging IP CTS usage regardless of a consumer’s need for the service.

12. *Modernizing IP CTS.* Concomitant with our other efforts to preserve IP CTS for consumers who need it, this proceeding also explores policies to improve the efficiency of IP CTS operations. IP CTS, like other TRS offerings, has relied on third-party CAs since its inception. In addition, wireline forms of IP CTS generally require users to acquire specialized communications equipment, from which IP CTS can be accessed only on the network of the IP CTS provider that distributes such devices. Notwithstanding the Act’s mandate for TRS to be functionally equivalent to voice telephone services, reliance on third-party operators and such specialized devices necessarily impose limits on accuracy, privacy, interoperability, and speed of service. In the absence of available direct communication alternatives, these deficiencies may have been unavoidable in the past. However, evolving technological innovations raise new questions about how Commission policy should address the communication access needs of people with hearing and speech disabilities in the future. This is especially important given reports that approximately 40-48 million individuals, or as much as 15 percent of the U.S. population, have hearing loss,³⁹ and that this number undoubtedly will increase significantly as our population ages.

³⁴ See *infra* paras. 140-41.

³⁵ See *infra* paras. 39-40.

³⁶ See *infra* para. 118.

³⁷ See *infra* para. 120.

³⁸ See, e.g., Letter from Philip J. Macres, Counsel for Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24, 10-51, and 03-123, Attach. 1, at 2 (June 20, 2013) (showing an ad from CaptionCall touting the ability to “get a sleek, state-of-the-art touch screen phone that you’ll want to show off”); *2013 IP CTS Reform Order*, 28 FCC Rcd at 13440, para. 42 (noting that many IP CTS devices are modern and attractive and provide enhanced sound amplification—features that are likely to entice consumers with or without hearing loss).

³⁹ See Hearing Loss Association of America (HLAA), *Basic Facts About Hearing Loss*, <http://hearingloss.org/content/basic-facts-about-hearing-loss> (last visited May 11, 2018) (stating that 48 million Americans report some degree of hearing loss); Centers for Disease Control and Prevention, *Too Loud! For Too*

13. To address this growing need, modernized, off-the-shelf technologies that can provide direct communication in real-time not only have the potential to provide people with disabilities with faster and more accurate services that are more private and integrated than human-assisted TRS; they can also do so at potentially a fraction of the cost.⁴⁰ In the case of IP CTS, we believe this can be achieved through the use of ASR, which has been defined as “the independent, computer-driven transcription of spoken language into readable text in real time.”⁴¹ Because of recent advances, ASR, which would eliminate the need for a CA to be on an IP CTS call, holds great promise for a telephone communication experience that may be superior to and more efficient than existing IP CTS. It is for this reason that in the Declaratory Ruling, we determine that CTS and IP CTS using ASR to generate captions are forms of relay service eligible for compensation from the TRS Fund, and in the Further Notice, we seek comment on setting a compensation rate for IP CTS using ASR.

III. REPORT AND ORDER

14. In this Report and Order, we adopt rule changes that enable us to better administer and support IP CTS by helping to minimize waste, fraud, and abuse. In Section A, we make this program more cost effective by establishing interim rates for IP CTS provider compensation in Fund Years 2018-19 and 2019-20 that move the compensation level closer to actual average provider costs. We also direct the TRS Fund administrator to require IP CTS providers to provide a more detailed breakdown and explanation of the costs incurred. This additional transparency will help us ensure that the costs reported by providers are reasonable. In Section B, we take initial steps toward ensuring that IP CTS is provided only to those individuals who need it to achieve functionally equivalent telephone communications service. To that end, we adopt rules that address the delivery of captions on IP CTS devices, require the accuracy of IP CTS information disseminated by providers, and establish a general prohibition against providing service to ineligible users.

A. IP CTS Compensation

15. IP CTS rates are presently determined using a methodology known as the Multistate Average Rate Structure Plan (MARS Plan), which calculates the weighted average per-minute compensation paid by state TRS programs to providers of intrastate CTS for the prior calendar year.⁴² In

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Long!, <https://www.cdc.gov/vitalsigns/hearingloss/> (last visited May 11, 2018) (stating that “[a]bout 40 million US adults aged 20-69 years have noise-induced hearing loss”).

⁴⁰ Two such examples are real-time text (RTT), which allows text to pass back and forth between users to a call in real-time, *Transition from TTY to Real-Time Text Technology; Petition for Rulemaking to Update the Commission’s Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 13568 (2016) (*RTT Order*) (authorizing RTT as an option in lieu of support for TTY technology in the wireless IP environment), and direct video communication for American Sign Language (ASL) users, which is now allowing such individuals to communicate in their native language with ASL-fluent representatives in certain customer call centers. See *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, and Order, 32 FCC Rcd 2436, 2484, para. 124 (2017).

⁴¹ Professor Pisal Ranjeet et al., *Automatic Speech Recognition System*, 2 Imperial J. of Interdisc. Res. 165, 165 (2016), <http://www.imperialjournals.com/index.php/IJIR/article/view/37/34>. In this proceeding, we use the term “ASR” to mean ASR alone, without CA participation in the creation of captions.

⁴² *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Declaratory Ruling, 22 FCC Rcd 20140, 20149-50, 20153-58, paras. 16, 26-38 (2007) (*2007 TRS Rate Methodology Order*). This method uses a “weighted” average in that it weighs each state’s compensation rate in accordance with the number of minutes in that state. In this Report and Order, when we refer

2013, in response to considerable growth in IP CTS and the declining use of CTS, the Commission sought comment on whether an alternative rate methodology would be more appropriate.⁴³

16. As the Commission has previously pointed out, our mandate in determining TRS rates is to ensure that the rates “correlate to actual reasonable costs.”⁴⁴ We find that MARS is no longer an effective methodology to ensure that IP CTS compensation rates correlate to actual reasonable costs. We therefore terminate use of the MARS methodology and commence a reduction in the IP CTS compensation rate, currently \$1.9467 per minute, to bring it more in line with the reasonable costs of providing this service. Based on currently available cost data,⁴⁵ we adopt the following per-minute compensation rates to bring them more in line with providers’ average reasonable costs: \$1.75 per minute from July 1, 2018, to June 30, 2019; and \$1.58 per minute from July 1, 2019 to June 30, 2020. Consistent

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to average per-minute costs or average per-minute compensation, we are referring to averages calculated in this manner (i.e., total costs or payments divided by total minutes) unless otherwise specified.

⁴³ 2013 IP CTS Reform FNPRM, 28 FCC Rcd at 13477-78, paras. 120-24. In its 2017 TRS Report, the TRS Fund Administrator also discusses a number of options for setting IP CTS rates. Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 19-23 (filed May 2, 2017), https://ecfsapi.fcc.gov/file/10502844703091/2017%20TRS%20Fund%20Annual%20Report_Redacted.pdf (2017 TRS Rate Report).

⁴⁴ 2013 IP CTS Reform FNPRM, 28 FCC Rcd at 13476, para. 117 (quoting 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20151-52, 20157, paras. 21, 35).

⁴⁵ See *infra* paras. 18, 23.

⁴⁶ See 47 U.S.C. § 225(b)(1).

⁴⁷ 2013 IP CTS Reform Order, 28 FCC Rcd at 13477 n.396.

⁴⁸ 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20158, para. 38.

⁴⁹ Thus, it is incorrect to state that the MARS-based IP CTS compensation rate is itself competitively determined. See Hamilton Comments, CG Docket Nos. 03-123, 10-51, at 13 (filed May 24, 2017) (Hamilton 2017 TRS Rate Report Comments). To the extent that there is competitive bidding involved in determining the IP CTS rate, such competition occurs at the state level and directly determines the compensation for a *different* service, CTS.

⁵⁰ The historical data on costs and demand for IP CTS discussed in this Report and Order, as well as the average CTS compensation rates and demand, were developed by the TRS Fund administrator. For IP CTS minutes, see National Exchange Carrier Association, Inc. (NECA) TRS Fund Payment Formula and Fund Size Estimate, CG Docket No. 03-123, Exh. 3-6 (filed Apr. 29, 2011) (2011 TRS Rate Report) (2008, 2009, and 2010 minutes); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Exh. 1-4 (filed May 1, 2013) (2013 TRS Rate Filing) (2011 minutes); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Exh. 1-4 (filed Apr. 30, 2014) (2014 TRS Rate Report) (2012 minutes); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Exh. 1-4 (filed Apr. 24, 2015) (2015 TRS Rate Report) (2013 minutes); 2018 TRS Rate Report, Exh. 1-3 (2014, 2015, 2016, 2017, and 2018 minutes); see also Letter from David Rolka, Rolka Loube, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 10-51, Exhs. 1-3, 1-3.1 (redacted), 1-3.2 (May 22, 2018) (2018 TRS Rate Report, Rev. Exhs. 1-3, 1-3.1, 1-3.2). For other data shown in Table 1, see *infra* notes 51-53.

⁵¹ 2011 TRS Rate Report, Exh. 3-5 (interstate CTS minutes for 2008, 2009, and 2010); NECA, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket No. 03-123, at 10, Exh. 3-6 (filed May 1, 2009), <https://ecfsapi.fcc.gov/file/6520215580.pdf> (2009 TRS Rate Report) (intrastate CTS minutes for 2008); NECA Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket No. 03-123, at 12 (filed Apr. 30, 2010), <https://ecfsapi.fcc.gov/file/7020443086.pdf> (2010 TRS Rate Report) (intrastate CTS minutes for 2009); 2011 TRS Rate Report, at 12 (intrastate CTS minutes for 2010); 2018 TRS Rate Report, Rev. Exh. 1-3 (total intrastate and interstate CTS minutes for calendar years 2011 to 2017).

⁵² 2009 TRS Rate Report at 11 (MARS rate for 2008-09); 2010 TRS Rate Report at 12 (MARS rate for 2009-10); 2011 TRS Rate Report at 12 (MARS rate for 2010-11); 2018 TRS Rate Report, Rev. Exh. 1-3 (MARS rates for 2011-12 to 2017-18).

with our statutory obligation to ensure that TRS is available in the most efficient manner,⁴⁶ we believe that it is necessary to adopt these interim rates. In the Further Notice, we seek additional data and comment on how to set compensation rates for subsequent years.

1. MARS Methodology No Longer Reflects Average Reported IP CTS Costs

17. When the Commission adopted the MARS Plan in 2007, IP CTS was a nascent service, provided by two companies reselling it from a single supplier.⁴⁷ Given the similarities between IP CTS and CTS, which was procured by state programs through competitive bidding processes, the Commission believed that the average per-minute compensation for CTS would “accurately reflect the reasonable actual costs of providing IP CTS,”⁴⁸ and therefore deemed this an appropriate proxy for setting the IP CTS compensation rate.⁴⁹ For several years, this approach seemed to be justified. Today, IP CTS is a mature service with its own cost history, and the per-minute costs currently reported by IP CTS providers are not comparable to those for CTS—largely, it appears, because demand for IP CTS now greatly exceeds the demand for CTS. Specifically, as shown in Table 1, from 2011 to 2017, annual CTS minutes declined from approximately 40 million to 19.9 million, while annual IP CTS minutes grew from approximately 29 million to 362 million—an amount that is more than 18 times greater than annual CTS minutes.⁵⁰ From 2013 to 2017, the annual growth rate for IP CTS minutes has averaged approximately 45 percent.

TABLE 1

Calendar Year	CTS Minutes ⁵¹	IP CTS Minutes	MARS Compensation Rate ⁵²	Average IP CTS Expenses ⁵³
2008	24,255,411	677,658 ⁵⁴	\$1.6569	
2009	33,284,774	2,413,506	\$1.6778	
2010	35,190,942	10,237,622	\$1.6951	
2011	40,175,545	28,829,227	\$1.7630	\$2.0581
2012	39,807,553	71,629,517	\$1.7730	\$1.6938
2013	38,997,790	83,391,085	\$1.7877	\$1.9782
2014	34,445,788	122,837,131	\$1.8205	\$1.6928
2015	29,157,226	193,039,200	\$1.8895	\$1.4739
2016	23,536,803	267,164,769	\$1.9058	\$1.2692
2017	19,911,331	362,379,714	\$1.9467	\$1.2326
2018 (proj.)	N/A	464,083,134	\$2.0007	\$1.3172

⁵³ See 2018 TRS Rate Report, Rev. Exh. 1-3. Average IP CTS expenses for each year represent the sum of the average expenses for each cost category in Exhibit 1-3 except return on investment and are calculated based on reported expenses that are allowable for TRS compensation as defined in prior Commission orders. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 19 FCC Rcd 12475, 12544, 12547-48, paras. 182, 189-90 (2004) (*2004 TRS Order*); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling and Further Notice of Proposed Rulemaking, 21 FCC Rcd 5442, 5448, 5457-58, paras. 15, 38 (2006) (*2006 Declaratory Ruling*); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Memorandum Opinion and Order, 21 FCC Rcd 8063, 8071, para. 17 (2006); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168-71, paras. 73-82.

⁵⁴ In 2008, the first year in which IP CTS was offered, IP CTS was available for only 10 months of the year.

18. Also, as shown in Table 1, the per-minute costs reported for IP CTS have diverged substantially from the MARS rate in the last few years. Average per-minute expenses for IP CTS dropped from \$2.0581 in 2011 to \$1.2326 in 2017, while the MARS rate increased from \$1.7630 to \$1.9467 for the same period. This divergence invalidates the rationale for continuing to use a MARS-based rate to determine IP CTS compensation. That is, the MARS rate no longer accurately reflects the actual reasonable costs of providing IP CTS.⁵⁵ Indeed, the 2017-18 MARS rate, \$1.9467 per minute, exceeds the average 2017 IP CTS expenses by approximately 58 percent, and generated industry profits that the TRS Fund administrator estimates at \$262 million—approximately 50 percent over provider expenses.⁵⁶ The new MARS rate of \$2.0007 is projected to cost \$347 million in excess of provider expenses.⁵⁷ Pursuant to the efficiency mandate of section 225 and consistent with our prior determinations that TRS rates generally should “correlate to actual reasonable costs,”⁵⁸ it is therefore necessary to realign the IP CTS compensation rate to correlate to actual reasonable costs for this service.⁵⁹

2. Setting a Rate Closer to Reasonable IP CTS Costs

19. In lieu of continuing to use the MARS methodology, we adopt interim IP CTS compensation rates for the next two years to move these rates closer to actual average provider costs. We disagree with Hamilton that we should defer terminating reliance on the MARS rate methodology and delay adopting a new rate until we refresh the record or take other steps in this proceeding.⁶⁰ The interim rates adopted reflect average provider costs based on actual provider cost data collected by the TRS Fund

⁵⁵ See *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13477, para. 120.

⁵⁶ See 2017 TRS Rate Report at 19, Exh. 1-3.1.

⁵⁷ See 2018 TRS Rate Report at 20, Exh. 1-3.1.

⁵⁸ See *supra* para. 16.

⁵⁹ *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13476, para. 117 (quoting *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20151-52, 20157, paras. 21, 35); see also *2013 VRS Reform Order*, 28 FCC Rcd at 8694-96, paras. 189-91. The order-of-magnitude difference between demand for IP CTS and for CTS fatally undermines Brattle Group’s assertion that “[t]here is no reason to believe that the cost of providing [CTS] under state contracts is materially different than under the federal [IP CTS] program,” and the diverging trends in the per-minute costs of CTS and IP CTS contradict their claim that “even if the costs of CTS and IP CTS do differ in level, it is likely that they do not differ greatly in trend.” See Letter from David A. O’Connor, Counsel to Hamilton Relay, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24, 03-123, Attach. at 27, 29 (filed Sept. 5, 2017) (Hamilton Brattle Group Paper *Ex Parte*). We note that there is no definitive evidence in the record showing the extent to which the substantial reduction in average reported per-minute IP CTS costs has resulted from innovations and cost-saving measures implemented by providers, or has simply followed naturally from the increased scale of provider operations. However, individual provider cost information received from the TRS Fund administrator indicates that per-minute costs have declined the most for those providers whose demand has increased most sharply, and Table 1 shows that average IP CTS costs generally have declined in step with increases in demand, suggesting that the influence of economies of scale on per-minute costs is significant. For these reasons, we reject the contention that the difference in demand between CTS and IP CTS does not significantly affect per-minute cost. Hamilton Comments, CG Docket Nos. 13-24 and 03-123, at 5-6 (filed Nov. 4, 2013) (Hamilton 2013 FNPRM Comments); see also Sorenson Comments, CG Docket Nos. 13-24 and 03-123, at 11-12 (filed Nov. 4, 2013) (Sorenson 2013 FNPRM Comments). Based on the record, it seems clear that, as with VRS, the less variable costs of IP CTS are more significant than providers claim. See *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Order, 32 FCC Rcd 5891, 5918, para. 52 (2017) (*2017 VRS Compensation Order*) (concluding that for VRS there are likely to be substantial economies of scale in administrative costs, marketing, and other areas).

⁶⁰ See, e.g., Hamilton 2013 FNPRM Comments at 12 (urging that additional proceedings are necessary before moving forward with a new rate methodology); see also Hamilton 2017 TRS Rate Report Comments at 13 (urging the Commission to consult with the Office of Economics and Data to be established within the FCC).

administrator over the past few years.⁶¹ Thus, unlike the situation in 2007, when there was no actual historical cost data for this service, and the Commission chose to use a proxy rate rather than rely on providers' speculative projections of cost and demand,⁶² we now have an accumulation of historical cost data sufficient to inform our interim rate determination.

20. In light of our conclusion that the MARS method is now ineffective in aligning rates with costs, and that the gap between the two is widening, we find it important to act without delay to bring provider compensation more in line with reported provider costs.⁶³ This is especially important given that IP CTS minutes, and therefore IP CTS funding, have increased dramatically over the last nine years. At the same time, the contribution base for the TRS Fund has been shrinking,⁶⁴ requiring interstate and international telecommunications and VoIP service providers, and their subscribers, to contribute an ever larger percentage of revenues to support these services.⁶⁵ We are also concerned that excessive compensation for IP CTS may increase provider incentives to recruit and register IP CTS users, regardless of their actual need for the service, leading to even greater potential for waste of TRS Fund dollars.⁶⁶ Thus, notwithstanding certain shortcomings that might be associated with a cost-based rate⁶⁷—and our consideration in the accompanying Further Notice of further changes to the compensation methodology—we find that such potential disadvantages are outweighed at this time by the benefits of ensuring that IP CTS compensation will come closer to reflecting providers' reasonable costs during this interim period.

21. We are unpersuaded by providers' procedural arguments against issuing a compensation methodology and new rate at this time based on alleged lack of notice.⁶⁸ In the *2013 IP CTS Reform FNPRM*, the Commission sought comment on whether it should adopt a different compensation methodology for IP CTS, and specifically sought comment on using a methodology based on analysis of reported provider costs.⁶⁹ Further, in every year since 2013, the TRS Fund administrator has gathered IP

⁶¹ See *supra* Table 1.

⁶² *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20151, para. 17. The availability of historical cost data thus mitigates concerns about the inherent unreliability of provider projections of cost and demand. See 2013 Hamilton FNPRM Comments at 2-3.

⁶³ According to Rolka Loube, the current MARS rate is above the cost of even the highest-cost IP CTS provider and allows all providers, even inefficient ones, to earn excessive profits, placing an unreasonable burden on contributors to the TRS Fund. 2018 TRS Rate Report at 20.

⁶⁴ Petition of IDT Telecom, Inc. (IDT) for Rulemaking, CG Docket No. 03-123, at 14 (filed Nov. 25, 2015), <https://ecfsapi.fcc.gov/file/60001345008.pdf> (IDT Petition); see also *supra* para. 8.

⁶⁵ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, 29 FCC Rcd 8044, 8045, para. 4 (CGB 2014) (adopting a contribution factor of 0.01219); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, 32 FCC Rcd 5142, 5143, para. 4 (2017) (*2017 TRS Rate Order*) (adopting a contribution factor of 0.02289).

⁶⁶ See *supra* paras. 9-10.

⁶⁷ *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20151, para. 18 (noting that a cost-based rate poses challenges due to the “costs, burdens, and uncertainties associated with evaluating, correcting, and re-evaluating provider data”).

⁶⁸ See Letter from David A. O'Connor, Counsel for Hamilton Relay, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 1-2 (filed Sept. 19, 2017) (raising concerns about the absence of a specific Commission rate methodology proposal); Letter from David A. O'Connor, Counsel for Hamilton Relay, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 13-24 (filed Nov. 3, 2017) (arguing that the Commission must make a specific rate methodology proposal in order to change rate methodologies and not rely on provider cost data to set rates if it did not formally request submission of such data).

⁶⁹ See, e.g., *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13477-78, paras. 120-21 (seeking comment on whether to adopt a different cost recovery methodology); *id.* at 13478-79, paras. 122-27 (seeking comment on various matters

CTS cost data from providers and has submitted its calculations of average provider costs based on this information to the Commission. From 2013 through 2017, the Consumer and Governmental Affairs Bureau (Bureau or CGB) then sought public comment on these submissions, including whether costs are correctly calculated, while specifically noting that such cost calculations may be used by the Commission to set a new compensation rate.⁷⁰ Therefore, there is no merit to the claim that IP CTS provider cost data is unreliable because it was allegedly submitted for a purpose other than setting compensation rates.⁷¹ Each year, and especially in 2017, parties have commented on these calculations and otherwise supplemented the record regarding IP CTS compensation issues in response to public notices seeking comment on annual TRS rate filings.⁷² Although comments have not yet been submitted on the most recently reported cost and demand data for 2017 and 2018 as presented by the TRS Fund administrator in its May 2018 Rate Report, the average per-minute expenses for those years, on which we rely below, are approximately one cent lower than the average expenses computed last year, for 2016 and 2017.⁷³ Further, no party disputed the accuracy of the averages calculated from the 2016-2017 data. Therefore, we conclude that the most recently filed cost and demand data is sufficiently reliable to serve as a basis for setting interim IP CTS rates.

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relevant to a cost-of-service methodology, including cost categories, rate periods, etc.). It is well established that the exact result reached after a notice and comment rulemaking need not be set out in the initial notice for the notice to be sufficient. Rather, the final rule must be “a logical outgrowth” of the rule proposed. *Public Service Comm'n of D.C. v. FCC*, 906 F.2d 713, 718 (D.C. Cir. 1990) (citing *AFL-CIO v. Donovan*, 757 F.2d 330, 338 (D.C. Cir. 1985); *United Steelworkers v. Marshall*, 647 F.2d 1189, 1221 (D. C. Cir. 1980), *cert. denied sub nom. Lead Industries Ass'n v. Donovan*, 453 U.S. 913 (1981)). Hamilton also suggests that use of IP CTS cost data may violate the Paperwork Reduction Act (PRA) if the data request was not approved by the Office of Management and Budget (OMB). Hamilton 2017 TRS Rate Report Comments at 14. However, there is no prohibition against using data that is voluntarily submitted to the TRS Fund administrator, and the voluntary submission of such data without a formal Commission requirement does not affect its reliability.

⁷⁰ See *Rolka Loube Saltzer Associates Submits Payment Formulas and Funding Requirement for the Interstate Telecommunications Relay Services Fund for the 2014-2015 Fund Year*, Public Notice, 29 FCC Rcd 5026, 5027 (2014); *Rolka Loube Saltzer Associates Submits Payment Formulas and Funding Requirement for the Interstate Telecommunications Relay Services Fund for the 2015-2016 Fund Year*, Public Notice, 30 FCC Rcd 4892, 4893 (2015); *Rolka Loube Saltzer Associates Submits Payment Formulas and Funding Requirement for the Interstate Telecommunications Relay Services Fund for the 2016-2017 Fund Year*, Public Notice, 31 FCC Rcd 4612, 4612-13 (2016); *Rolka Loube Saltzer Associates Submits Payment Formulas and Funding Requirement for the Interstate Telecommunications Relay Services Fund for the 2017-2018 Fund Year*, Public Notice, 32 FCC Rcd 3880, 3880-81 (2017). Thus, since 2013, IP CTS providers have been on notice that IP CTS cost data requested by the administrator could be used for setting an IP CTS compensation rate. Indeed, from the beginning of the TRS program, provider cost reports have been used for setting compensation rates. *Telecommunications Relay Services, and the Americans with Disabilities Act of 1990*, Third Report and Order, 8 FCC Rcd 5300, 5304-06 (1993) (*1993 TRS Order*).

⁷¹ See Letter from Rebekah P. Goodheart, Counsel for CaptionCall, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 1-2 (filed May 29, 2018) (Sorenson May 29, 2018 *Ex Parte*). Sorenson also fails to explain why the cost data would be less reliable just because it was submitted for a different purpose.

⁷² See, e.g., ClearCaptions Comments, CG Docket Nos. 10-51 and 03-123 (filed May 24, 2017) (ClearCaptions 2017 TRS Rate Report Comments); Hamilton 2017 TRS Rate Report Comments; Sorenson Comments, CG Docket Nos. 10-51 and 03-123 (filed May 24, 2017) (Sorenson 2017 TRS Rate Report Comments); Sprint Comments, CG Docket Nos. 10-51 and 03-123 (filed May 24, 2017) (Sprint 2017 TRS Rate Report Comments).

⁷³ In the 2018 TRS Rate Report, the weighted average of historical 2017 expenses (\$1.2326 per minute) and projected 2018 expenses (\$1.3172 per minute) is approximately \$1.28. See 2018 TRS Rate Report, Rev. Exh.1-3. In the 2017 TRS Rate Report, the weighted average of historical 2016 expenses (\$1.2859) and projected 2017 expenses (\$1.2974) was approximately \$1.29. See 2017 TRS Rate Report, Exh. 1-3. Average per-minute expenses for each year are derived by subtracting the return on investment (ROI) calculated by Rolka Loube (based on an 11.25% rate of return) from the total reported cost (including ROI).

22. Most fundamentally, the provider cost data upon which we rely in this order represents a major improvement over the MARS formula. It is clear that for present purposes, relying on the cost data that has been submitted to date by the providers themselves is vastly preferable to continuing to rely on the MARS proxy rate, which has been shown to produce an IP CTS compensation rate far in excess of actual IP CTS provider costs.⁷⁴ Moreover, the interim rates we set here allow providers a substantial cushion above average costs, in order to move the compensation rate even closer to average costs in a gradual manner.

23. *Average Expenses and Operating Margin.* We conclude that, as with VRS compensation rates, a weighted average of the historical per-minute expenses reported by providers for 2017 and the projected per-minute expenses for 2018—which for IP CTS is approximately \$1.28 per minute⁷⁵—provides a reasonable baseline for taking initial steps to move the IP CTS compensation rate toward actual cost.⁷⁶ Further, we find it reasonable to allow an operating margin for IP CTS providers in the same “zone of reasonableness” that applies to VRS providers.⁷⁷ In the *2017 VRS Compensation Order*, the Commission reviewed operating margins for companies in analogous service sectors.⁷⁸ Based on these operating margins, the Commission found a zone of reasonableness between 7.6% to 12.35%.

⁷⁴ We disagree with Sorenson’s contention that the provider cost data on which we rely is “non-uniform, opaque, and incomplete.” Sorenson May 29, 2018 *Ex Parte* at 3. First, the alleged non-uniformity of which Sorenson complains involves the licensing fees that Sorenson claims to have paid its own affiliate, which we appropriately disallow for purposes of the interim rates, for the reasons explained below. *See infra* para. 35. Second, correction of the opacity identified by Sorenson—the failure of some IP CTS providers to fully describe the subcontractor expenses they have reported in the “Other” category—is more likely to result in disallowance of some previously compensated costs than the addition of new, previously unreported costs. *See infra* paras. 36-37. Finally, claims that the Commission’s cost categories unreasonably exclude costs that the TRS Fund should support (*e.g.*, Sorenson May 29, 2018 *Ex Parte* at 2-3) are not new and repeatedly have been found meritless by the Commission and courts of appeals. *See infra* para. 33.

⁷⁵ As noted above, historical 2017 expenses average \$1.2326 per minute. *See supra* Table 1. Projected 2018 expenses average \$1.3172 per minute. In relying on a weighted average of historical and projected costs, rather than projected costs only (*see* 2018 TRS Rate Report at 22 (calculating an average cost-based rate for IP CTS based on provider projected costs for 2018 and 2019)), we follow the approach used in recent Commission decisions setting compensation rates for VRS. *2013 VRS Reform Order*, 28 FCC Rcd at 8696, 8703, paras. 191, 211 (setting VRS rates using a combination of projected costs and actual, historical costs); *2017 VRS Compensation Order*, 32 FCC Rcd at 5928-29, para. 69 (same); *see also infra* note 261 (noting that provider cost projections are not always reliable, and citing as an example the disparity between providers’ projections of 2017 IP CTS costs and the actual 2017 IP CTS costs reported in 2018); *infra* para. 83 (seeking comment on the relative reliability of historical and projected costs for setting a cost-based rate). We note that the interim rates we set today are well above average projected as well as historical costs.

⁷⁶ *See 2017 VRS Compensation Order*, 32 FCC Rcd at 5927-28, para. 69.

⁷⁷ *Id.* at 5903-05, paras. 24-26. As in the case of VRS, adopting an operating margin approach addresses providers’ concerns that, because substantial plant investment is not necessary to provide TRS, an allowed profit margin based on the telephone industry model of return on investment may generate insufficient profits to attract significant long-term investment in TRS companies. *See, e.g.*, Sorenson 2013 FNPRM Comments at 6-9; Sorenson 2017 TRS Rate Report Comments at 4; *see also infra* note 81.

⁷⁸ *2017 VRS Compensation Order*, 32 FCC Rcd at 5903-05, paras. 24-26 (providing an exhaustive analysis of this issue). The Commission found that quarterly pre-tax operating margins for non-legal professional, scientific, and technical Services averaged 4.6% in the 2013-16 period and that operating margins for a subsector including translation and interpretation services averaged 7.4% in the 2013-16 period. The *2017 VRS Compensation Order* also cited surveys of government contractors conducted by Grant Thornton LLP, conducted between 2009 and 2015, in which the majority of respondents consistently reported profit rates before interest and taxes between 1% and 10%, with the median profit rate in the neighborhood of 6%. Finally, the Commission also considered information submitted by Sorenson regarding operating margins in the information technology consulting sector. *See id.*

Given the service sector similarities between VRS and IP CTS,⁷⁹ and that the bulk of costs for both are attributable to labor rather than capital,⁸⁰ we conclude that this zone of reasonableness is also appropriate for setting interim IP CTS rates.⁸¹ Adding an operating margin within that reasonable range to the average IP CTS expenses of \$1.28 results in a total average cost between approximately \$1.38 and \$1.44.⁸²

24. While our goal is to move the IP CTS rate to a cost-based level, we recognize that immediately reducing the IP CTS compensation rate to this extent could produce a disruption in the IP CTS market and potentially negative consequences for both providers and consumers. For example, certain providers have higher-than-average costs and may have significant difficulty adjusting to a flash-cut reduction to a cost-based level.⁸³ In the analogous context of VRS, the Commission rejected the alternative of a flash-cut rate reduction in favor of gradual rate reductions toward cost-based levels.⁸⁴ The Commission concluded that although the cost data justified the immediate adoption of a cost-based rate, taking such action “would represent a significant and sudden cut to providers’ compensation with

⁷⁹ For example, IP CTS and VRS both make use of professional CAs, which belong to the translation and interpretation services sector, and payment for both services are made through a government-created entity. *See 2017 VRS Compensation Order*, 32 FCC Rcd at 5904, para. 25.

⁸⁰ As the Commission found with respect to VRS, *id.*, a large portion of IP CTS costs are labor costs, primarily salaries and benefits for CAs. *See 2018 TRS Rate Report*, Rev. Exh. 1-3 (showing average 2017 costs of \$0.2771 for “CA Related” and \$0.5730 for “Other” expenses, which, as explained below, include CA labor costs that are folded into fees paid by certain providers to their subcontractors); *see also, e.g.*, Hamilton 2013 FNPRM Comments at 5 (arguing that IP CTS costs are predominantly CA-related expenses).

⁸¹ Contrary to Sorenson’s recent claim (Sorenson May 29, 2018 *Ex Parte* at 3), we conclude that these similarities between VRS and IP CTS are sufficient to justify the use of the VRS operating-margin zone of reasonableness on an interim basis—particularly because, under the glide-path approach we adopt here, the interim rates allow a substantial cushion for recovery of average operating margins (23.4% for the second interim rate of \$1.58) that are much higher than the top end of the VRS zone of reasonableness. We note that an operating margin approach such as this will be substantially more compensatory to IP CTS providers as a group than the traditional rate-of-return approach, because the amount of net investment reported by providers is generally much smaller in relation to their reported annual operating expenses. *See 2018 TRS Rate Report*, Rev. Exh. 1-3 (showing, for example, average 2017 return on investment of \$0.0109, which is less than 1% of average allowable expenses). This approach thus addresses the concern that prescription of a rate of return on capital is inappropriate for a labor-intensive business such as IP CTS. *See Sorenson 2013 FNPRM Comments* at 7-9. At this time, we do not need to determine a specific allowed operating margin within this reasonable range, because the initial rate reductions adopted in this Report and Order will not move the compensation rate below the level that would result from setting the allowed operating margin at the upper end of that range.

⁸² We note that these average-cost figures include the average subcontractor expenses reported by providers in the “Other” category, which averaged \$0.5730 per minute in 2017 and are projected to average \$0.5932 in 2018. *See 2018 TRS Rate Report*, Rev. Exh. 1-3. As explained below, this reporting practice has made it difficult to confirm that all expenses reported in this category are reasonable and allowable. *See infra* paras. 36, 73. To the extent that some of the expenses reported as “Other” prove to be non-allowable, the range of total average costs given above may be too high. For this reason and others described in the Further Notice, we will reexamine the appropriate calculation of reasonable IP CTS costs in light of the record established in that proceeding, in order to set a revised IP CTS compensation rate that we propose to make effective for a longer rate period.

⁸³ Compensation rates based on average costs reasonably apply pressure on higher-cost providers to increase their efficiency. *See, e.g., Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990*, Order on Reconsideration, Second Report and Order, and Further Notice of Proposed Rulemaking, 8 FCC Rcd 1802, 1806, para. 24 (1993) (*1993 TRS FNPRM*). The interim rates we adopt here, by contrast, avoid placing undue immediate cost pressure on such providers, allowing recovery of average expenses plus operating margins that are well above the high end of the zone of reasonableness we establish above.

⁸⁴ *See, e.g., 2013 VRS Reform Order*, 28 FCC Rcd at 8704, para. 213 (designing a four-year “glide path” toward cost-based VRS rates); *2017 VRS Compensation Order*, 32 FCC Rcd at 5913-14, para. 62 (extending the “glide path” for Tier III rates to continue moving that rate gradually toward a cost-based level).

potentially negative consequences for consumers.”⁸⁵ Instead, the Commission opted for a longer “glide path” toward a cost-based rate, an approach that we similarly find to be appropriate for IP CTS compensation. We further conclude that initial rate reductions of approximately 10 percent per year, over two years, will strike a reasonable balance between the need to bring IP CTS rates in line with costs and reduce the TRS Fund contribution burden, on the one hand, and our interest in avoiding rate shock for IP CTS providers and potentially disrupting the provision and quality of service for consumers, on the other. In this regard, we note that a 10% annual reduction is comparable to analogous reductions made in the VRS context.⁸⁶ This approach will allow a reasonable opportunity for higher-cost providers to adjust to average-cost-based compensation by reducing unnecessary expenses—and thereby encourage multiple providers to remain in the IP CTS market. Finally, allowing the compensation rate to stay, for the present, at levels well above average allowable costs responds to some parties’ concerns regarding the need for IP CTS providers to continue participating in ASR and other research, and thus will “not discourage or impair the development of improved technology.”⁸⁷

25. Our decision to apply these interim rates for a period of two years responds to our need to take immediate action to align the IP CTS rate more closely to the costs of providing this service—given

⁸⁵ 2013 VRS Reform Order, 28 FCC Rcd at 8703-04, para. 212.

⁸⁶ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Order, 25 FCC Rcd 8689, 8695-96, para. 12 (2010) (2010 TRS Rate Order), *aff’d Sorenson Communications, Inc. v. FCC*, 659 F.3d 1035 (10th Cir. 2011) (Sorenson 2011) (ordering a one-year adjustment in tiered VRS compensation rates, with reductions ranging from approximately 4%, for the Tier II rate, to 19%, for the Tier III rate); 2013 VRS Reform Order, 28 FCC Rcd at 8705-06, para. 215 & Table 2 (ordering yearly reductions in the Tier III VRS rate ranging from approximately 7% to 10%); 2017 VRS Compensation Order, 32 FCC Rcd at 5913-14, para. 62 (ordering further annual reductions in the Tier III VRS rate, ranging from approximately 7% to 12%). The Commission’s 2010 rate reductions moving toward, but not all the way to, cost-based levels were upheld on judicial review, as were its 2013 “glide path” rate reductions. See *Sorenson 2011*, 659 F.3d at 1047-48 (“Given the Commission’s dual purposes of moving reimbursement rates closer to actual costs while avoiding a too onerous cut to providers, we hold it was reasonable to [set rates at] the mid-point between the existing rates and the actual costs NECA determined.”); *Sorenson 2014*, 765 F.3d 37. To be clear, there is no basis to the suggestion that we are blindly “importing” the interim approach applied previously in the VRS context and mechanically applying it here in the absence of any record or reasoned basis. See *Sorenson May 29, 2018 Ex Parte* at 3. While VRS and IP CTS may differ in some respects, there are also significant similarities (see *supra* para. 23) that justify looking to the VRS context for guidance. And for both services, the compensation rates have trended above provider costs over time in similar ways. Accordingly, it is appropriate for the Commission to use VRS as a model in adopting a similar “glide-path” approach for IP CTS to bring compensation back to cost-based levels without causing undue disruption to the market. We note that even *Sorenson* does not object to a single interim reduction of 10% for the IP CTS rate. See *Sorenson May 29, 2018 Ex Parte* at 3. If a single reduction is appropriate, we see no reason why a second one would not also be justified where, among other things, the record shows that the initial rate reduction would still leave the compensation rate well above the high end of reasonable IP CTS costs. Moreover, the interim IP CTS rate reductions made here are more gradual than the “mid-point”-based VRS rate adjustments that the court of appeals found reasonable in 2010. The initial 10 percent reduction in the IP CTS compensation rate reduces it to \$1.75. By contrast, the approximate mid-point between the current \$1.9458 rate and \$1.41 (a rate that would recover average expenses plus an operating margin in the middle of the zone of reasonableness) is \$1.68. Thus, the initial 10 percent rate reduction stops short of the “mid-point between the existing rates and the actual costs [the TRS Fund administrator] determined.” *Sorenson 2011*, 659 F.3d at 1047-48. The second 10 percent rate reduction brings the 2019-20 rate to \$1.58—the mid-point between \$1.75 and \$1.41, consistent with *Sorenson 2011*. Therefore, there is no merit to *Sorenson*’s claim that the \$1.58 lacks any reasoned basis. *Sorenson May 29, 2018 Ex Parte* at 2-3.

⁸⁷ 47 U.S.C. § 225(d)(2). Accordingly, there is no merit to *Sorenson*’s contrary contention. See *Sorenson May 29, 2018 Ex Parte* at 3-4 (arguing that “the draft Order does not include any consideration of how the interim rates will affect providers’ incentives to develop new or improved technology”). Furthermore, while *Sorenson* argues that it is uncertain “how the adoption of ASR will affect providers’ cost structures,” *Sorenson May 29, 2018 Ex Parte* at 4, we seek comment below on the appropriate rate for that form of TRS, and we note that the record before us indicates that compensable ASR costs are likely much lower than the costs for IP CTS.

the widening gap between existing rates and actual costs⁸⁸—while recognizing that there are a number of issues concerning compensation rates for IP CTS must yet be resolved, as addressed in the *Further Notice*. First, this period will allow us to fully evaluate the appropriateness of some categories of allowable costs for this service, as well as the extent to which compensation for this service should be subject to price-cap-index adjustments. Second, given that automated speech recognition is becoming a viable and far less costly alternative to CA-assisted IP CTS, this period will afford us an opportunity to determine how best a fully automated method of IP CTS should be compensated.⁸⁹ Additionally, we have opted to set interim rates for two years, rather than a single year, because we believe it will provide a greater degree of rate certainty for providers than would a shorter period of time.

26. For all these reasons, we direct that the IP CTS compensation rate be reduced in two steps of approximately 10 percent each: first, a \$0.19467 reduction from the \$1.9467 per minute rate currently in effect, to a rate of \$1.75 per minute for the 2018-19 Fund Year, from July 1, 2018, to June 30, 2019;⁹⁰ and second, a further \$0.17 reduction of the compensation rate from \$1.75 to \$1.58 per minute for the 2019-20 Fund Year, from July 1, 2019, to June 30, 2020.⁹¹ These reductions will save the TRS Fund a minimum of \$399 million over two years, as compared to applying the MARS rate.⁹² Below and in the *Further Notice*, we note that currently reported data may overstate the costs of providing IP CTS. Therefore, if the Commission finds that actual costs are substantially below the interim rates we adopt here, we may adjust those rates accordingly.

27. *Alternatives to a Cost-Based Rate.* We disagree with arguments against using current provider cost reports to guide us in setting interim rates. While the use of provider cost data adds complexity and may require detailed analysis,⁹³ it would not be reasonable for the Commission, in order to avoid such complexity, to continue to rely on a proxy—such as the MARS rate—that does not bear a reasonable relationship to actual costs. Indeed, in this instance, a temporary rate fluctuation is necessitated *precisely* because the MARS methodology remained in use for a number of years after it ceased to be relevant. In these circumstances, we find that any burden arising from switching to a more complex rate methodology is outweighed by the benefits of having a more accurate compensation rate, including the benefit of savings to the Fund.

⁸⁸ See *2013 VRS Reform Order*, 28 FCC Rcd at 8704, para. 213 (determining that it was “appropriate to “jump-start” the transition to cost-based VRS rates in light of the widening gap between compensation rates and provider costs).

⁸⁹ See *infra* paras. 96-100. While, during the interim rate period, we may approve certification for ASR providers on a conditional basis utilizing a temporary compensation rate to allow these services to get underway, the Commission will need to determine rates for this method on a more permanent basis going forward.

⁹⁰ In accordance with our normal procedures, CGB issued a PN seeking comment on the MARS-based rates proposed by Rolka for 2018-19. *Rolka Loubé Associates Submits Payment Formulas and Funding Requirement for the Interstate Telecommunications Relay Services Fund for the 2018-2019 Fund Year*, Public Notice, DA 18-494 (CGB May 14, 2018).

⁹¹ In the 2017 TRS Rate Report, Rolka Loubé discussed an alternative that would transition the IP CTS compensation rate from \$1.9058 (the compensation rate for the 2016-17 Fund Year) to \$1.2965 in equal steps over a four-year period, to allow time for IP CTS providers with fixed-price contracts for CA service to alter their business plans, by either “restructuring their sub-contracts or self-providing the CA function.” 2017 TRS Rate Report at 21-22. The interim rate plan we adopt provides roughly similar results, except that it ends after two steps rather than four, in order to accommodate the need for further refinement of the compensation methodology as proposed in the *Further Notice*.

⁹² See 2018 TRS Rate Report, Rev. Exh. 1-3. For Fund Year 2018-19, the amount saved would be $(\$2.0007 - \$1.75) \times 526$ million minutes, or approximately \$132 million. 526 million minutes is the approximate mid-point of the demand estimates for 2018 and 2019. For Fund Year 2019-20, the amount saved can be very conservatively estimated at $(\$2.0007 - \$1.59) \times 651$ million minutes, or approximately \$267 million. This estimate assumes that the MARS rate would not increase further and that IP CTS demand would increase by only 125 million minutes in 2020, the same increment as projected for 2019.

⁹³ See, e.g., Hamilton 2013 FNPRM Comments at 2-3 (citing changes in VRS and IP Relay rates).

28. We further conclude that setting compensation for a two-year period can mitigate the risk of rewarding inefficiency, discouraging innovation, and incentivizing providers to incur unnecessary costs, all potential effects of annual cost-of-service rate setting.⁹⁴ A multi-year approach allows individual providers to gain additional profit during each multi-year period from any innovations and efficiency-enhancing measures that reduce their per-minute costs during that period.⁹⁵ Additionally, in setting interim rates, we do not see a need to choose between establishing a rate based on cost analysis and the price cap approach periodically advocated by Sorenson.⁹⁶ In the TRS context, the Commission has consistently recognized that, while price cap indices may be used to adjust a compensation rate during a rate period, the initial rate should be set using a cost-based reference point.⁹⁷ As explained above, due to the substantial gap between the current compensation rate and average cost, we find it necessary to defer setting a rate at the level of average cost, and instead to move the rate more gradually toward a cost-based level. Accordingly, the question of whether to use such a cost-based rate to initialize a price cap scheme is premature.⁹⁸

29. We also reject the suggestion that to avoid engaging in cost calculations, we set an initial compensation rate for a multi-year period based on the average of MARS rates from an earlier period.⁹⁹ Given that current IP CTS demand is now far higher than any historical intrastate CTS demand, and average per-minute IP CTS costs are lower than any historical MARS rate, setting a compensation rate based on a historical MARS rate would be no less arbitrary than leaving the current MARS rate in place. While the Further Notice proposes to set a compensation rate that initializes a multi-year compensation rate period, subject to price-cap index adjustments, in line with Sorenson's basic idea, the record supports setting that initializing rate based on reasonable provider costs rather than a no-longer-relevant proxy for

⁹⁴ See Sorenson 2013 FNPRM Comments at 6-7 (noting that these can be the effects from single year, rate-of-return rate setting); Hamilton Brattle Group Paper *Ex Parte*, Attach. at 25-26.

⁹⁵ In arguing broadly that linking rates to costs diminishes providers' incentives to innovate and otherwise reduce costs, the Brattle Group does not consider this mitigating effect of multi-year rate periods. Hamilton Brattle Group Paper *Ex Parte*, Attach. at 31-33.

⁹⁶ See Sorenson Petition for Rulemaking, CG Docket No. 03-123, at 1 (filed Feb. 20, 2013), <https://ecfsapi.fcc.gov/file/7022123490.pdf> (Sorenson Petition); Sorenson 2013 FNPRM Comments at 9-16; Sorenson Reply Comments, CG Docket Nos. 13-24 and 03-123, at 8-10 (filed Dec. 4, 2013) (Sorenson 2013 FNPRM Reply Comments); see also Letter from John T. Nakahata, Counsel for Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123, 13-24, at 2 (filed Nov. 16, 2015) (withdrawing 2013 petition and renewing support for MARS plan); Letter from John T. Nakahata, Counsel for Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 1-3 (filed Jan. 27, 2016) (same); Letters from John T. Nakahata, Counsel for Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123, 13-24, and 10-51, at 3 (filed Oct. 4, 2016, Oct. 10, 2016 (erratum)) (Sorenson Oct. 4, 2016 *Ex Parte*) (returning to advocacy of price caps); Letter from John T. Nakahata, Counsel to CaptionCall, to Marlene H. Dortch, Secretary, FCC, at 1-2 (Apr. 24, 2017) (Sorenson Apr. 24, 2017 *Ex Parte*) (same).

⁹⁷ See, e.g., *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20153, para. 25 (noting that “[u]nder price caps, we would have to determine an initial rate that accurately reflects providers’ historical, actual, reasonable costs”); see also *id.* at 20164, 20173, paras. 46 n.141, 66; *2013 VRS Reform Order*, 28 FCC Rcd at 8695, para. 191 (“Multi-year rate plans . . . must have a defensible cost-based reference point from which to proceed.”).

⁹⁸ Moreover, given the recent downward trend in IP CTS costs, *supra* Table 1, price cap adjustments appear unnecessary at present. See *2017 VRS Compensation Order*, 32 FCC Rcd at 5913, para. 45 (“[G]iven that the weighted average of provider’s historical costs has declined measurably over the last four years, we do not believe that the use of such indices is necessary at this time to ensure that VRS providers can continue to recover their reasonable allowable costs, including a reasonable operating margin, over the next four years.”).

⁹⁹ Sorenson originally suggested setting an initial IP CTS compensation rate at \$1.6766, based on the average of MARS rates from 2008 to 2010. Sorenson Petition at 7-9; Sorenson 2013 FNPRM Comments at 13. More recently, Sorenson has advocated setting the rate at \$1.7746, based on the average of MARS rates from 2010 to 2013. Sorenson Apr. 24, 2017 *Ex Parte* at 1-2.

costs.¹⁰⁰

30. Next, we reject the argument that the Commission must avoid reducing rates to the level of reasonable provider costs because its 2013-14 reduction in IP Relay rates drove several IP Relay providers to leave that market.¹⁰¹ The IP Relay rate reduction was adopted *after* a number of providers announced their exits, some of which resulted from efforts to put a halt to the fraudulent use of IP Relay by ineligible users.¹⁰²

31. Finally, we decline suggestions that we defer or modify the interim rate reductions in order to mitigate their impact on IP CTS providers with higher-than-average costs,¹⁰³ or that we immediately move from a single averaged IP CTS compensation rate to a tiered rate structure in which providers of different sizes receive different average per-minute compensation.¹⁰⁴ The Commission's

¹⁰⁰ Although Sorenson also has suggested that the Commission "seek comment on possible market-based solutions, such as holding a reverse auction to initialize a price cap for IP CTS rates," Sorenson 2017 TRS Rate Report Comments at 6, at this time, given that we have reasonably reliable cost data that can be used to guide rate-setting, we find no basis to defer consideration of rate changes for the period of time that would be necessary to consider, adopt, and implement a new market-based approach.

¹⁰¹ See, e.g., Sorenson 2013 FNPRM Reply Comments at 4-5. Moreover, although some parties argue that setting rates based on average costs will force above-average cost providers out of business (Hamilton Brattle Group Paper *Ex Parte* at 31-32; Letter from Paul C. Besozzi, Counsel to ClearCaptions, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 3 (filed Sept. 5, 2017) (ClearCaptions Sept. 5, 2017 *Ex Parte*); Letter from Paul C. Besozzi, Counsel to ClearCaptions, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24 (filed Sept. 29, 2017) (ClearCaptions Sept. 29, 2017 *Ex Parte*), this argument is based on the assumption that an above-average cost provider has no opportunity to reduce its own costs. This assumption seems implausible in the IP CTS context, especially given the overall cost trend for IP CTS over the last five years. See *supra* Table 1. Moreover, the introduction of ASR provides a new opportunity for IP CTS providers to reduce their costs. In addition, as discussed in Part V.A.1. below, the costs for a number of IP CTS providers include large sums paid to subcontractors, including intellectual property license fees, the latter of which, at least, are presumably negotiated fees that are not constrained by external costs. Given that these providers and their subcontractors will have a shared incentive to ensure that their costs are reduced to the extent necessary to remain viable in the IP CTS market, we believe there is likely to be significant cost reduction flexibility for such providers, notwithstanding the Brattle Group's assumption.

¹⁰² See, e.g., *Purple Communications, Inc.*, Forfeiture Order, 30 FCC Rcd 14892 (2015) (*Purple Forfeiture Order*); Press Release, U.S. Dept. of Justice, AT&T Agrees to Settle Allegations Involving IP Relay Services Provided to Hearing- and Speech-Impaired Persons (Nov. 7, 2013), <https://www.justice.gov/opa/pr/att-agrees-settle-allegations-involving-ip-relay-services-provided-hearing-and-speech>; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 28 FCC Rcd 12218, 12218, para. 2 n.5 (CGB 2013) (providing dates of exit for Hamilton, AT&T, and Sorenson). Purple Communications exited the IP Relay market effective November 14, 2014, about six months after the Commission issued a notice of apparent liability for forfeiture against Purple. See *Purple Forfeiture Order*, 30 FCC Rcd at 14893, para. 5 & n.12.

¹⁰³ See Letter from David A. O'Connor, Counsel for Hamilton Relay, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket No. 03-123 and 13-24 (filed May 24, 2018) (Hamilton May 24, 2018 *Ex Parte*) (urging the Commission to establish a two-year interim rate at the \$1.75 level); Letter from Paul C. Besozzi and Peter M. Bean, Counsel to ClearCaptions, LLC, to Marlene H. Dortch, Secretary, FCC, and Attachments, CG Docket No. 03-123 (filed May 25, 2018) (recommending that the Commission limit interim rate reductions to 5 percent annually); Letter from Cristina O. Duarte, Director of Regulatory Affairs, MezmoCorp (dba InnoCaption), to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24 (filed May 30, 2018) (urging the Commission to freeze the IP CTS compensation rate at the current level); Letter from Scott R. Freiermuth, Counsel, Government Affairs, Federal Regulatory, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24 (filed June 1, 2018) (urging the Commission to freeze the IP CTS compensation rate at the current level).

¹⁰⁴ See ClearCaptions Sept. 5, 2017 *Ex Parte* at 3; ClearCaptions Sept. 29, 2017 *Ex Parte*, Attach. 1 at 5; see also ClearCaptions May 25, 2018 *Ex Parte*, Attach. 1 at 4 (proposing an alternative interim compensation rate, for

traditional approach has been to set TRS compensation based on a single, generally applicable rate that averages each provider's costs and demand for service,¹⁰⁵ in order to "creat[e] strong incentives for TRS providers to offer high quality innovative services at reasonable cost."¹⁰⁶ Further, in setting IP CTS compensation, the Commission has consistently adhered to this principle.¹⁰⁷ The current MARS rate is a single, averaged rate—based on the weighted-average compensation paid to CTS providers by state programs.¹⁰⁸ By realigning IP CTS compensation more closely to the average-cost benchmark, we thus adhere to existing practice in the IP CTS context, which reasonably places pressure on higher-cost providers to reduce costs in line with the statutory mandate to make TRS available in the most efficient manner.¹⁰⁹

32. As noted above, however, in adjusting the IP CTS compensation rate on an interim basis to bring it closer to the level of average costs, we take a glide-path approach that allows higher-cost providers a reasonable opportunity to adjust to these necessary changes by reducing unnecessary expenses. Going further to support higher-cost providers would not be advisable at this time in light of the critical need for significant movement toward a more efficient, less wasteful IP CTS compensation rate.¹¹⁰ In the Further Notice, however, we seek comment on whether, following the interim period, movement to tiered or emergent-provider rates may be justified in the IP CTS context.¹¹¹

33. *Allowable Costs.* The TRS Fund administrator's cost calculations used to establish the interim rates we adopt in this Report and Order are based on the same categories of a provider's costs that generally have been deemed allowable in calculating rates for other forms of TRS. Historically, the Commission has limited allowable costs to a provider's reasonable costs directly attributable to the provision of TRS.¹¹² In a series of orders between 2004 and 2007, the Commission adopted specific

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emergent providers handling fewer than 5.5 million minutes per month, which would be reduced only 5 percent annually from the current rate).

¹⁰⁵ When a single compensation rate is set using provider cost calculations, it generally has been based on the weighted average of relevant provider costs, which takes account of each provider's demand for service by dividing total provider costs by total provider minutes. *1993 TRS FNPRM*, 8 FCC Rcd at 1806, para. 24; *Telecommunications Services for Individuals with Hearing and Speech Disabilities; Recommended TRS Cost Recovery Guidelines Request by Hamilton Telephone Company for Clarification and Temporary Waivers*, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 22948, 22952, paras. 8-9 (2001) (*2001 TRS Order*); *2013 VRS Reform Order*, 28 FCC Rcd at 8703, para. 211.

¹⁰⁶ *1993 TRS FNPRM*, 8 FCC Rcd at 1806, para. 24; *see also 2001 TRS Order*, 16 FCC Rcd at 22952, paras. 8-9; *2013 VRS Reform Order*, 28 FCC Rcd at 8703, para. 211.

¹⁰⁷ For VRS, the Commission has modified this approach to some extent by authorizing tiered compensation rates, in order to address specific conditions in that market. *See infra* para. 88.

¹⁰⁸ *See supra* para. 15 & note 42.

¹⁰⁹ We also note that in granting InnoCaption a conditional certification to provide IP CTS, the Commission imposed cost-reporting conditions based on a concern that the higher-than-usual costs involved in InnoCaption's method of providing captions could hinder its ability to meet minimum TRS standards while being compensated at the applicable IP CTS rate. *Notice of Conditional Grant of Application of Miracom USA, Inc., for Certification as a Provider of Internet Protocol Captioned Telephone Service Eligible for Compensation from the Telecommunications Relay Services Fund*, Public Notice, 29 FCC Rcd 5105, 5107-08 (CGB 2014). At the time of its certification, InnoCaption was named Miracom USA, Inc.

¹¹⁰ *See supra* paras. 15-16.

¹¹¹ *See infra* paras. 88-90.

¹¹² *2004 TRS Order*, 19 FCC Rcd at 12544, para. 182 & n.520; *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168-69, para. 74.

guidelines defining allowable costs for TRS generally.¹¹³ Among other things, the Commission excluded recovery for indirect overhead and for financial transaction costs or fees unrelated to the provision of relay services, and affirmed that costs attributed to end-user equipment and software and the installation, maintenance, and testing of such equipment are not compensable.¹¹⁴ Such exclusions have been upheld repeatedly on judicial review.¹¹⁵ We therefore find unpersuasive the claim that reliance on allowable costs in setting rates “excludes other costs . . . that are real and entirely non-discretionary.”¹¹⁶ Although IP CTS providers repeat some of the same objections that have been raised in other contexts regarding the Commission’s cost categories,¹¹⁷ they raise no significant arguments or identify anything specific to IP CTS that has not been addressed and previously resolved in the Commission’s prior rulings.¹¹⁸

34. For example, Sorenson asserts that costs incurred to provide user equipment should be allowable because “[f]or IP CTS, the only way to use captions is to have either a hardware or software phone provided by the IP CTS provider, as there are no IP CTS phones on the open market nor are there standards for such devices.”¹¹⁹ However, Sorenson does not identify anything specific to IP CTS that requires the *TRS Fund*, rather than users themselves or state equipment distribution programs, to pay for the provision of such IP CTS phones.¹²⁰ As the Commission recently explained, Section 225 requires the provision of relay *service*, to

“enable communication between persons who use a TTY or other non-voice terminal device and an individual who does not use such device.”
Costs associated with CPE are not part of a provider’s expenses in making relay *services* available; rather they must be incurred by consumers to receive these services—to the same extent that people who do not use relay services must purchase their phones.¹²¹

¹¹³ 2004 TRS Order, 19 FCC Rcd at 12547-48, paras. 189-90; 2006 Declaratory Ruling, 21 FCC Rcd at 5448, 5457-58, paras. 15, 38; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Memorandum Opinion and Order, 21 FCC Rcd 8063, 8071, para. 17 (2006); 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20169-71, paras. 73-82; see also 2013 VRS Reform Order, 28 FCC Rcd at 8696-97, paras. 192-94; 2017 VRS Compensation Order, 32 FCC Rcd at 5895-903, paras. 10-22.

¹¹⁴ 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20168-71, paras. 73-82; see also 2013 VRS Reform Order, 28 FCC Rcd at 8696-97, paras. 193-94.

¹¹⁵ See *Sorenson 2011*; *Sorenson 2014*.

¹¹⁶ Sorenson 2013 FNPRM Comments at 8.

¹¹⁷ See, e.g., *id.* at 8-9; Sorenson 2013 FNPRM Reply Comments at 5; ClearCaptions 2017 TRS Rate Report Comments at 4-5, 8-11; Hamilton 2017 TRS Rate Report Comments at 12; Sorenson 2017 TRS Rate Report Comments at 5-6; Sprint 2017 TRS Rate Report Comments at 5-6.

¹¹⁸ Thus, we disagree with Hamilton’s contention that the Commission has failed to provide adequate guidance to IP CTS providers as to what costs are reasonable or allowable. Hamilton 2017 TRS Rate Report Comments at 15. Although Hamilton claims there are “almost certainly wide disparities in the various approaches that IP CTS providers take in submitting their costs,” *id.*, we are unaware of any such disparities in approach that can fairly be attributed to lack of guidance from the Commission. Indeed, four of the five current IP CTS providers have ample experience in calculating and submitting costs for other forms of TRS and have little excuse for being unaware of the guidance provided by the Commission’s numerous past decisions in this area.

¹¹⁹ Sorenson 2013 FNPRM Reply Comments at 5; see also ClearCaptions 2017 TRS Rate Report Comments at 11.

¹²⁰ We also note that several IP CTS providers previously charged users for the sale or lease of IP CTS phones, and that several offer service through software that can be downloaded to cellphones, PCs, and other existing user devices.

¹²¹ 2017 VRS Compensation Order, 32 FCC Rcd at 5897, para. 12 (footnotes omitted) (quoting 2006 Declaratory Ruling, 21 FCC Rcd at 5447, 5457-58, paras. 15, 38). Regarding other non-allowable costs, while ClearCaptions objects to the Commission’s existing limitations on the allowability of E911 charges, as well as overhead and executive compensation that are not directly attributable to TRS (see ClearCaptions 2017 TRS Rate Report

35. Similarly, we are so far unpersuaded by Sorenson's argument that we should permit a provider to *impute*, as an additional allowable cost, the *value* of any intellectual property developed by itself or its affiliate, to the extent the provider uses such intellectual property in providing IP CTS.¹²² Significantly, while other IP CTS providers have reported costs related to licenses for intellectual property that they purchased from third parties, Sorenson argues that it should be allowed to include, as part of its IP CTS costs, license fees that capture the alleged value of intellectual property that it developed on its own. As explained in the *2017 VRS Compensation Order*, the Commission has not previously allowed compensation for the imputed value of TRS providers' property, whether tangible or intangible, and we see no reason to do so under a methodology that is based on compensating providers for their actual costs.¹²³ Sorenson further claims, however, that its IP CTS subsidiary, CaptionCall, transferred certain intellectual property to an affiliate, and is now paying license fees to the affiliate for the use of such property. Sorenson seeks to include the licensee fees paid to CaptionCall's affiliate as a reimbursable expense,¹²⁴ even though such license fees are being paid to an affiliate for the use of intellectual property assets that were developed by CaptionCall itself and were transferred to the affiliate's account, allegedly, for security reasons ("as part of an initiative to be better able to safeguard its VRS and IP CTS intellectual property").¹²⁵ There does not appear to be any legitimate reason why this license fee, paid to an affiliate for intellectual property that was produced by CaptionCall itself, should be treated as an allowable expense, especially when CaptionCall is already permitted to recover eligible expenses incurred in developing such intellectual property.¹²⁶ Accordingly, for the purpose of setting these interim compensation rates, we decline to include CaptionCall's claimed license payment to its affiliate as an allowable IP CTS expense.¹²⁷ We note that, even if Sorenson's proposed license fee were included in allowable costs, the interim rates set for 2018-19 and 2019-20 would still permit recovery of a

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Comments at 8, 11), ClearCaptions has not shown why those limitations, which are also applicable to other forms of TRS, are inappropriate for IP CTS. We also note that in the hypothetical described by ClearCaptions, in which a small business provides no other services and is "100% committed to the provision of a single relay service," ClearCaptions 2017 TRS Rate Report Comments at 9, any executive compensation and overhead incurred by that provider would be directly attributable to that relay service and would be allowable unless otherwise found to be an unreasonable expense.

¹²² Sorenson Apr. 24, 2017 *Ex Parte* at 3-4; Letter from John T. Nakahata, Counsel to CaptionCall, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 2 (filed May 18, 2017) (Sorenson May 18, 2017 *Ex Parte*); Sorenson 2017 TRS Rate Report Comments at 5-6; Letter from John T. Nakahata, Counsel to CaptionCall, LLC and Sorenson Communications, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 3-4 (filed Sept. 7, 2017) (Sorenson Sept. 7, 2017 *Ex Parte*).

¹²³ *2017 VRS Compensation Order*, 32 FCC Rcd at 5902, para. 21.

¹²⁴ Sorenson Sept. 7, 2017 *Ex Parte* at 3-4.

¹²⁵ *Id.* at 3. However, given the timing of the transfer, which appears to have occurred a few months before Sorenson's first *ex parte* filing making the argument described above (*see* Sorenson Apr. 24, 2017 *Ex Parte*), it is also possible that the transfer was made at least in part for the purpose of enabling the argument.

¹²⁶ Further, Sorenson does not explain what has become of the price paid by CaptionCall's affiliate to purchase the intellectual property from CaptionCall, and why, if the transfer was made solely to "safeguard" CaptionCall's intellectual property, any licensing fee could not simply be paid out of the invested purchase price—making the transaction a "wash" between the two affiliates. Under the Commission's rule on affiliate transactions, the imputed cost for a product or service purchased from an affiliate must be the lower of fair market value and net book cost, unless the affiliate sells at least 25% of the service to third parties. 47 CFR § 32.27(b), (d).

¹²⁷ However, we seek additional comment on license fees issues, including those raised by Sorenson, in the Further Notice. Thus, we are not "prejudging" the issue (Sorenson May 29, 2018 *Ex Parte* at 4), and Sorenson will have an opportunity to submit additional material to support its claim.

reasonable operating margin above average allowable expenses.¹²⁸

3. Collecting Additional Cost Information for Setting Future IP CTS Rates

36. Although we conclude that we have sufficient information to determine interim rates through June 30, 2020, based on provider cost data collected by the TRS Fund administrator over the past several years, we remain concerned that some of the expenses incurred by IP CTS providers have not been reported in sufficient detail to enable the Fund administrator to confirm their allowability and reasonableness. In particular, we note that some IP CTS providers contract with other entities for the provision of call centers, CA staffing, and other services, as well as the licensing of intellectual property. When these providers have submitted annual IP CTS cost information to the TRS Fund administrator, the payments to contractors are often classified as “subcontractor expenses,” with no breakdown into specific expense reporting categories. Given that the expenses classified in this manner comprise an unusually large portion of total reported IP CTS costs,¹²⁹ such reporting obscures the nature of a substantial portion of reported IP CTS costs and hinders review of such costs incurred by such providers to assess their allowability and reasonableness.¹³⁰ Accordingly, to assist the Commission in setting IP CTS rates, we direct the TRS Fund administrator to require IP CTS providers that contract for the supply of services used in the provision of TRS to include information about payments under such contracts classified according to the substantive cost categories specified by the administrator, including, e.g., allocation of subcontractor expenses between call center expenses and intellectual property licensing fees,¹³¹ and how the provider determined or calculated the portion of contractual payments attributable to each cost category. All cost reports submitted in the future by IP CTS providers shall provide such a breakdown and explanation. We also direct the Fund administrator, to the extent that the administrator reasonably deems necessary for the purpose of determining the allowability and reasonableness of costs reported to be incurred in the provision of TRS, to require providers to submit additional detail on such contractor expenses, including the submission of complete copies of such contracts and related correspondence or other records and information relevant to determining the nature of the services provided and the allocation of the costs of such services to cost categories. We believe this additional transparency will help the Commission ensure that the costs reported by providers are reasonable.

37. We believe that the Commission’s current authority to collect the above information is contained in rules that require TRS providers to provide the TRS Fund administrator “true and adequate data, and other historical, projected and state rate related information reasonably requested to determine the TRS Fund revenue requirements and payments,” and which authorize both the TRS Fund administrator and the Commission “to examine and verify TRS provider data as necessary to assure the accuracy and integrity of TRS Fund payments.”¹³² To further clarify such authority, however, and to provide for greater consistency in the rules, we amend our rules, pursuant to the *2013 IP CTS FNPRM*,¹³³

¹²⁸ See 2018 TRS Rate Report, Exh. 1-3.1 (confidential version).

¹²⁹ Such subcontractor expenses are classified as “Other,” and in 2017, the “Other” category averaged \$0.5730 per minute, out of total IP CTS expenses of \$1.2326 per minute. See 2018 TRS Rate Report, Rev. Exh. 1-3.

¹³⁰ See *infra* para. 75 (seeking comment on what constitutes a reasonable licensing fee for intellectual property licensed by CapTel to multiple providers for the provision of IP CTS).

¹³¹ See Sorenson Apr. 24, 2017 *Ex Parte* at 3-4 (raising concerns about costs associated with such intellectual property licensing fees that might be hidden in the subcontractor expenses category); Sorenson 2017 Comments TRS Rate Report at 5-6 (raising concerns about the accountability of subcontractors regarding fees for licensing intellectual property).

¹³² 47 CFR § 64.604(c)(5)(iii)(D)(I), (6).

¹³³ *2013 IP CTS FNPRM*, 28 FCC Rcd at 13478, para. 124 (seeking comment on “whether the Commission should require the same filings of cost and demand data by IP CTS providers as are currently required of VRS and IP Relay

to explicitly provide for the collection of information laid out in the preceding paragraph. In addition, we further amend our rules to provide that, in the course of an audit or otherwise upon demand, an IP CTS provider must make available documentation, including contracts with entities providing services or equipment directly related to the provision of IP CTS, to the Commission, the TRS Fund administrator, or any person authorized by the Commission or TRS Fund administrator to conduct an audit.¹³⁴

B. Measures to Limit Unnecessary IP CTS Use and Waste of the TRS Fund

38. As discussed above and more fully in the Further Notice,¹³⁵ the dramatic growth in IP CTS call volume appears to result in part from provider practices that promote over-use of IP CTS, including by people with hearing loss who may be able to achieve functionally equivalent telephone service using other forms of off-the-shelf or assistive technologies.¹³⁶ We conclude that the following steps are needed to minimize such unnecessary use, and the consequent waste of TRS Fund resources. Additional measures to serve this goal are proposed in the accompanying Further Notice.

1. Volume Control and Caption Settings

39. We amend our rules to prohibit IP CTS providers from linking the volume control and captioning functions of an IP CTS device or software application.¹³⁷ In the *2013 IP CTS Reform FNPRM*, we sought comment on delinking volume control from captions, including the costs and benefits of such delinking. Several commenters support, and none opposes, the prohibition against linking these features.¹³⁸ We conclude that allowing users to enable volume control only when captions are turned on promotes waste, in that it forces the costly generation of captions even when the user only requires increased volume to communicate effectively by phone.¹³⁹ In addition, de-coupling these features will enable consumers who are not registered IP CTS users to access the amplification features of IP CTS devices without the captions. Based on the record, which indicates that current IP CTS user equipment can be configured to delink volume control from captions, we find no evidence that compliance with a de-linking requirement will impose a substantial cost on IP CTS providers,¹⁴⁰ and conclude that any likely

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providers and on the degree of any administrative burden such filings would impose on the Commission and the providers”).

¹³⁴ See 47 CFR § 64.604(c)(5)(iii)(N)(I)(v) (expressly requiring that “[a]ll third party contracts or agreements entered into by an eligible [VRS] provider must be in writing” and that “[c]opies of such agreements shall be made available to the Commission and to the TRS Fund administrator upon request”).

¹³⁵ See *supra* paras. 9-11; *infra* Part V.E.1.

¹³⁶ See, e.g., Area Seniors, *Miracle-Ear & CaptionCall*, <http://www.areaseniorsinc.org/miracle-ear-captioncall/> (last visited May 11, 2018) (advertising CaptionCall but not explaining that the individual must require the use of captions).

¹³⁷ *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13487, para. 147 (proposing this approach and seeking comment on this proposal).

¹³⁸ See Consumer Groups Comments, CG Docket Nos. 13-24 and 03-123, at 28 (filed Nov. 4, 2013) (Consumer Groups 2013 FNPRM Comments); Hamilton 2013 FNPRM Comments at 16; Sorenson 2013 FNPRM Comments at 22-23; NASRA Reply Comments, CG Docket Nos. 13-24 and 03-123, at 2 (filed Nov. 12, 2013) (NASRA 2013 FNPRM Reply Comments).

¹³⁹ For example, a consumer who needs captions in a noisy environment may simply need to amplify the phone’s volume without captions in a quieter one.

¹⁴⁰ See, e.g., Hamilton 2013 FNPRM Comments at 16 (stating that “current IP Captel equipment models can be configured to de-link amplification and captions”); Sorenson Oct. 4, 2016 *Ex Parte* at 3 (stating that CaptionCall’s caption phones permit amplification to be used even when captions are not activated); Letter from John T. Nakahata, Counsel to CaptionCall, LLC, and Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123, 13-24, at 2 (filed Jan. 12, 2018) (Sorenson Jan. 12, 2018 *Ex Parte*) (“CaptionCall’s equipment has always allowed

cost will be more than offset by the efficiency gain resulting from the reduction in unnecessary captioning services.

40. To allow manufacturers and service providers a reasonable period of time to reconfigure existing devices (such as those currently in warehouses), we set the compliance deadline for making this change at six months after release of this Report and Order. No provider has suggested that delinking the captions from the volume would be difficult to accomplish or would require an exceptionally long period of time.¹⁴¹ Therefore, IP CTS providers must ensure that all IP CTS devices—as well as user software for such devices—that they *newly distribute* to users¹⁴² more than six months after the release of this Report and Order are configured to allow volume control to be adjusted independently of the captioning feature. We also require providers to ensure that all *previously distributed* devices are delinked within six months after the release of this Report and Order.

2. Website, Advertising, and Educational Information Notifications

41. We amend our rules to require IP CTS providers to include both of the following factual notifications in a clear and prominent location on their advertising brochures, websites, user manuals, and other informational materials and websites:¹⁴³

- IP captioned telephone service may use a live operator. The operator generates captions of what the other party to the call says. These captions are then sent to your phone.¹⁴⁴
- There is a cost for each minute of captions generated, paid from a federally administered fund.

A number of commenters support the provision of such notices.¹⁴⁵ In the case of websites, we require such language to be included on the home page, each page that provides consumer information about IP CTS, and each page that provides information on how to order IP CTS or IP CTS equipment.

42. We conclude that requiring these notifications will enhance our efforts to prevent casual or inadvertent use of IP CTS. In light of the extraordinary escalation in the usage of this service over the last few years, and marketing campaigns that may be causing confusion about who is eligible to use this

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customers to use amplification, regardless of whether captions are activated.”). Commenters do not contend that the costs of de-linking would be substantial.

¹⁴¹ We note that in 2013, when the subsequently vacated Default-Off Rule was adopted, the Commission initially gave IP CTS providers 30 days from Federal Register publication of the rule to make their end user devices compliant. Providers that had to issue software updates in order to comply requested and were granted waivers providing an additional 31 to 45 days. Thus, all software updates necessary to comply were completed within 75 days of Federal Register publication of the new rule, and within less than 90 days after release of the Report and Order adopting the rule. *See Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 28 FCC Rcd 6454 (CGB 2013).

¹⁴² Although we do not require IP CTS providers to be involved in the distribution of IP CTS devices, we believe that many if not most end user devices used for IP CTS are currently distributed by, or installed under the supervision of, an IP CTS provider. The requirement regarding new distribution applies to such devices.

¹⁴³ *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13489, para. 152 (proposing these locations for notices that (1) “the captions on captioned telephone service are provided by a live communications assistant who listens to the other party on the line and provides the text on the captioned phone” and (2) “the cost of captioning each Internet protocol captioned telephone call is funded through a federal program”).

¹⁴⁴ This portion of the notice is required to the extent that the provider is not exclusively using non-CA-assisted automatic speech recognition for the production of captions.

¹⁴⁵ *See, e.g.*, Miracom Comments, CG Docket Nos. 13-24 and 03-123, at 7 (filed Oct. 22, 2013) (Miracom 2013 FNPRM Comments) (agreeing that these notices would impose “minimal cost while helping to minimize usage by persons who do not need the service”); HLAA Comments, CG Docket Nos. 13-24 and 03-123, at 15-16 (filed Feb. 26, 2013) (HLAA 2013 Initial NPRM Comments).

service, and when its use is appropriate,¹⁴⁶ we cannot rule out the possibility that a sizeable portion of the individuals using this service may not need this service to achieve effective communication.¹⁴⁷ Requiring that IP CTS users receive accurate information about how this service works and is funded may help to deter those who do not need it from engaging in its improper use.

43. The record provides no basis to conclude that placement of these notices will impose a significant burden that outweighs their benefits.¹⁴⁸ We agree with the Hearing Loss Association of American (HLAA) that particularly when captioning devices are turned on by default, it is critical to make potential users aware through “multiple and repeated sources of information” that IP CTS involves significant costs and must not be used by individuals who do not need it.¹⁴⁹ Nor are we persuaded that such warnings will discourage individuals with a legitimate need for IP CTS from signing up for or using this service.¹⁵⁰ Persons that truly need this free service for functionally equivalent telephone service have every incentive to obtain it. Rather than deter IP CTS use by such individuals, these notices will help to ensure that individuals who might be attracted to it are aware of its functions and financing. The action we take also is consistent with an already existing obligation for IP CTS devices to include notices prohibiting the use of captions by non-registered users.¹⁵¹

3. General Prohibition on Providing Service to Users Who Do Not Need It

44. We amend our rules to adopt a general prohibition against providing IP CTS to consumers who do not genuinely need the service, by modifying the current prohibition on VRS providers engaging in fraudulent, abusive, and wasteful practices to include IP CTS providers.¹⁵² We conclude that this prohibition is necessary for IP CTS as well as VRS because the Commission cannot always predict the specific forms that waste, fraud, or abuse may take, and because the Commission has fiduciary and statutory obligations to ensure that IP CTS providers are not handling IP CTS calls by ineligible individuals.¹⁵³ In the past, the Commission’s prohibitions against questionable provider practices have been reactive, rather than proactive.¹⁵⁴ In light of our finding that the characteristics of IP

¹⁴⁶ See *supra* paras. 9-11.

¹⁴⁷ See, e.g., Hamilton 2013 FNPRM Comments at 4-5; TEDPA Mar. 2015 *Ex Parte* at 1.

¹⁴⁸ Hamilton provides no evidence to support its claim that inclusion of these messages in informational materials would unduly restrict its ability to advertise its service. See Hamilton 2013 FNPRM Comments at 18-19; Hamilton Reply Comments, CG Docket Nos. 13-23 and 03-123, at 12-14 (filed Dec. 4, 2013) (Hamilton 2013 FNPRM Reply Comments); see also Sorenson 2013 FNPRM Comments at 31-32.

¹⁴⁹ HLAA 2013 Initial NPRM Comments at 15-16; see also Sorenson 2013 FNPRM Comments at 31 (“were default-on captions permitted, the proposed advertising restrictions might serve a useful purpose in ensuring that only eligible, hard-of-hearing users access IP CTS”).

¹⁵⁰ Hamilton 2013 FNPRM Comments at 19; Sorenson 2013 FNPRM Comments at 31-32.

¹⁵¹ 47 CFR § 64.604(c)(11)(iii); 2013 *IP CTS Reform Order*, 28 FCC Rcd at 13461, para. 89.

¹⁵² See 2013 *IP CTS Reform FNPRM*, 28 FCC Rcd at 13489, para. 153 (proposing this prohibition). The VRS prohibition is at 47 CFR § 64.604(c)(13); see also 2013 *VRS Reform Order*, 28 FCC Rcd at 8668-69, paras. 131-32. See Sorenson May 29, 2018 *Ex Parte* at 5-7, Attach. A.

¹⁵³ 47 U.S.C. § 225(b)(1) (requiring that TRS rules and practices promote the provision of TRS “in the most efficient manner”).

¹⁵⁴ See, e.g., 2013 *VRS Reform Order*, 28 FCC Rcd at 8668, para. 130 (experience confirmed that in adopting rules aimed at curbing existing TRS abuses, the Commission could not foresee specific forms that waste, fraud, and abuse may take in the future); *FCC Clarifies that Certain TRS Marketing and Call Handling Practices Are Improper and Reminds that VRS May Not Be Used as a Video Remote Interpreting Service*, Public Notice, 20 FCC Rcd 1471, 1473 (CGB 2005) (prohibiting incentives to make relay calls or register with providers); 2007 *TRS Rate Methodology Order*, 22 FCC Rcd at 20173-75, paras. 89-94 (prohibiting financial and other tangible incentives tied to usage); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling, 23 FCC Rcd 8993, 8998-99, para. 13 (2008) (2008 *Provider-Consumer Contacts*

CTS make it susceptible to being used by individuals who may not need it, with this action, we seek to prevent such practices before they occur.

45. As amended, the rule prohibits both IP CTS and VRS providers from engaging in practices that the provider knows or has reason to know will cause or encourage (1) the unauthorized use of TRS, (2) false or unverified TRS Fund compensation claims, (3) the making of TRS calls that would not otherwise be made, and (4) the use of TRS by consumers who do not need the service in order to communicate by telephone in a functionally equivalent manner.¹⁵⁵

46. Although some IP CTS providers argue that a general prohibition provides insufficient guidance to providers regarding what is prohibited,¹⁵⁶ we are not aware of any evidence that the application of this rule to VRS providers, since 2013, has unduly exposed them to liability for unwitting violations. Nevertheless, to provide further clarification regarding the types of actions that would violate the rule, we clarify that “unauthorized use” of IP CTS, under clause (1) above, means use by an individual who is not registered with a provider. Further, as explained in the *2013 VRS Reform Order*, a practice is prohibited where it artificially stimulates TRS usage, enables or encourages participation by unauthorized users, or uses financial incentives to attract new TRS users or to increase usage.¹⁵⁷ This list is provided

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Declaratory Ruling) (prohibiting relay providers from using TRS consumer or call data to contact consumers in attempts to increase the number or length of relay calls), *rev'd in part, Sorenson Communications, Inc. v. FCC*, 567 F.3d 1215 (10th Cir. 2009).

¹⁵⁵ See, e.g., *2013 IP CTS Reform Order*, 28 FCC Rcd at 13430-35, paras. 19-29 (prohibiting financial incentive programs that may result in registration for and usage of relay services by consumers who do not need these services to obtain functionally equivalent telephone service and prohibiting financial rewards that incent hearing professionals to encourage consumers to order and use IP CTS when a client does not need the service). The modification to this rule makes clear that it is not intended to apply a strict liability standard to either VRS or IP CTS providers. See *Sorenson* May 29, 2018 *Ex Parte* at 5-7, Attach. A. We do not make *Sorenson*'s other proposed edit to Section 64.604(c)(13)(i)(C) of the rules concerning “the making of VRS or IP CTS calls that would not otherwise be made” because we reject *Sorenson*'s contention that it is unconstitutionally vague. See *id.* at 6-7, Attach. A. First, a nearly identical rule for VRS has been in place for five years. See *2013 VRS Reform Order*, 28 FCC Rcd at 8668-69, paras. 131-32. Moreover, the Commission has a long history of prohibiting providers from causing or encouraging the making of TRS calls that would not otherwise be made, and therefore parties have ample Commission precedent to provide them with notice and instruction on how the prohibition will be enforced. See, e.g., *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling, 20 FCC Rcd 1466, 1469, paras. 7-8 (CGB 2005) (*2005 Financial Incentives Declaratory Ruling*); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 20 FCC Rcd 12503, 12505, para. 5 (CGB 2005) (*Long Distance Discounts Declaratory Ruling*); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20182, para. 93; *2008 Provider-Consumer Contacts Declaratory Ruling*, 23 FCC Rcd at 8998, para. 13; *2013 VRS Reform Order*, 28 FCC Rcd at 8668-69, paras. 131-32. We also reject *Sorenson*'s contention that Section 64.604(c)(13)(i)(C) is so overbroad and unclear that provision of the service would itself violate the rule. The rule is clearly intended to prohibit a much narrower range of conduct: conduct that is “fraudulent, wasteful, and abusive,” such as providing incentives for “unnecessary use of relay services.” See *2013 VRS Reform Order*, 28 FCC Rcd at 8668-69, paras. 131-32 (emphasis added). Finally, this rule does not contravene the First Amendment, as the Commission has a substantial government interest in preventing fraud, waste, and abuse in the TRS program, and this rule only prohibits conduct that the provider knows or reasonably should know facilitates those ills. It thus “does not ban any and all marketing of IP CTS to new users.” *Sorenson* May 29, 2018 *Ex Parte* at 6, and is no more extensive than necessary to achieve our interest in ensuring the integrity of the TRS program. See *Central Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of NY*, 447 U.S. 557, 566 (1980).

¹⁵⁶ See *Miracom* 2013 FNPRM Comments at 9-10; *Purple Comments*, CG Docket Nos. 13-24 and 03-123, at 9-10 (filed Nov. 4, 2013) (*Purple* 2013 FNPRM Comments); *Hamilton* 2013 FNPRM Comments at 19-20; *Sorenson* 2013 FNPRM Comments at 32 (each generally seeking Commission guidance on or specific notice of prohibited behaviors to prevent inadvertent violations).

¹⁵⁷ See, e.g., *Long Distance Discounts Declaratory Ruling*, 20 FCC Rcd at 12505-06, para. 6 (concluding that programs “directed at giving the consumer an incentive to make a TRS call in the first place . . . are prohibited”);

by way of example only and is not intended to be exhaustive. However, we carve out one exception to this rule, to allow IP CTS providers to be compensated for calls made by unregistered users when such calls are made from temporary, public IP CTS devices set up in emergency shelters.¹⁵⁸ We take this step to ensure that users with hearing loss will continue to have access to telephone communications devices during and in the aftermath of natural disasters and other emergencies. When service for such a device is initiated at the shelter, the IP CTS provider must notify the TRS Fund administrator of the date of such activation and termination.

47. In addition, an IP CTS provider shall not seek payment from the TRS Fund for any minutes of service that it knows or has reason to know are resulting from such prohibited practices. Any IP CTS provider that becomes aware of such practices being or having been committed by any person shall, as soon as practicable, report such practices to the Commission or the TRS Fund administrator. All monies paid from the TRS Fund to providers who are found by the Commission to be in violation of this new IP CTS rule shall be recoverable by the TRS Fund administrator, and such providers may also be subject to forfeitures¹⁵⁹ and other enforcement actions.

IV. DECLARATORY RULING ON AUTOMATIC SPEECH RECOGNITION

48. In this Declaratory Ruling, we determine that the provision of CTS and IP CTS using ASR to generate captions is a form of relay service eligible for compensation from the TRS Fund if provided in compliance with applicable TRS mandatory minimum standards.¹⁶⁰ Specifically, we conclude that such services are included within the statutory definition of TRS, as “telephone transmission services that provide the ability” to engage in communication by wire or radio “in a manner that is functionally equivalent” to voice communications service.¹⁶¹ Given that the vast majority of captioned telephone services already rely on CA-assisted ASR,¹⁶² recent improvements in ASR as a stand-alone technology merit its authorization as a compensable form of TRS. We believe that by taking this action, we take another step in fulfilling the objectives of the TRS program to provide functionally equivalent telephone service in the most efficient manner.

A. Benefits of ASR

49. The use of ASR to generate captions for CTS and IP CTS has several benefits.¹⁶³ First, ASR can better achieve near simultaneous communication than is possible with CA-assisted captions. A 2016 study conducted by MITRE, a contractor to the Commission, found that for calls using ASR, transcription delays averaged about two seconds, compared with a range of 4.1 to 15.8 seconds for calls using CA-assisted ASR.¹⁶⁴ Consumer surveys conducted by MITRE also indicated that some consumers

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2005 Financial Incentives Declaratory Ruling, 20 FCC Rcd at 1469-70, para. 9 (prohibiting any kind of financial incentives or rewards, including arrangements tying the receipt of equipment to minimum TRS usage).

¹⁵⁸ Letter from Blake E. Reid, Counsel to Telecommunications for the Deaf and Hard of Hearing, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 5 (filed May 25, 2018) (Consumer Groups May 25, 2018 *Ex Parte*).

¹⁵⁹ See 47 U.S.C. § 503(b).

¹⁶⁰ As noted earlier (*supra* para. 13), in this proceeding, we use the term “ASR” to refer to fully automated speech recognition (i.e., achieved solely through automated speech recognition engines with no human involvement), while acknowledging that speech recognition engines also play a role in forms of CTS and IP CTS that make use of human assistance.

¹⁶¹ 47 U.S.C. § 225(a)(3).

¹⁶² Only one provider, InnoCaption, generates captions using stenography.

¹⁶³ In this Declaratory Ruling, we generally discuss ASR in the context of IP CTS. However, our decision to allow use of this method to generate captions is also applicable to CTS, given the similarity of the two services.

¹⁶⁴ MITRE Corporation, Internet Protocol Caption Telephone Service (IP CTS) – Summary of Phase 2 Usability Testing Results at 20 (Table 8: Average Transcription Delay by Provider) (2016), CG Docket Nos. 03-123 and 13-

prefer captions generated using ASR over captions facilitated by CAs.¹⁶⁵ When taken together, these results suggest that by closing the temporal gap between a party's utterances and the display of captions, ASR may improve users' ability to "keep up" with a conversation—for example, because they have greater opportunity to interrupt and ask clarifying questions.

50. Second, the substantially lower costs of operation for ASR can allow for the provision of IP CTS with far greater efficiency.¹⁶⁶ Finally, as a fully automated method of generating captions that is not dependent on human intervention, ASR can (1) allow enhanced call privacy and (2) ensure the seamless continuation of communications when exigent circumstances, such as severe weather events, threaten IP CTS call center operations.¹⁶⁷

51. ASR appears to be approaching—if not exceeding—the levels of accuracy achieved by CA-assisted IP CTS.¹⁶⁸ By many accounts, the accuracy of text produced using ASR has improved dramatically over the past year.¹⁶⁹ For example, Google is reported to have achieved a 4.9% ASR error rate, considerably below its 23% error rate in 2013 and its 8% error rate in 2015. Similarly, Microsoft reports that it is "pioneering advances in conversational speech recommendation," that can improve the accuracy and readability of text produced using a fully automated service.¹⁷⁰ We conclude that such

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24 (posted Apr. 11, 2018),

<https://ecfsapi.fcc.gov/file/10411287298464/MITRE%20Corporation%20Summary%20of%20Phase%202.pdf>

(MITRE Phase 2 Summary). The MITRE Corporation (MITRE) is a private, not-for-profit corporation that operates federally funded research and development centers.

¹⁶⁵ MITRE Phase 2 Summary.

¹⁶⁶ See, e.g., 2018 TRS Rate Report at 24-25; VTCSecure, LLC, Internet-Based TRS Certification Application, CG Docket No. 03-123 at 4-5 (filed May 26, 2017) (VTCSecure Application) (asserting that the use of ASR will result in much lower costs to provide IP CTS); MachineGenius, Inc., Internet-based TRS Certification Application, CG Docket No. 03-123, at 5, 7-9 (filed Oct. 13, 2017) (MachineGenius Application) (noting that without having to hire, train, and manage CAs, IP CTS providers will be able to scale service and add capacity based on demand without an effect on call performance—permitting a more efficient delivery of this service); Letter from Robert Felgar, CEO of RAZ Mobility, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 3 (filed Nov. 30, 2017) (RAZ Mobility Nov. 30, 2017 *Ex Parte*) (predicting a \$75 million savings to the TRS Fund if only 10 percent of relay traffic shifts to their ASR product, Speech2RTT); see also 47 U.S.C. § 225(b)(1) (mandating that TRS be made available "in the most efficient manner").

¹⁶⁷ See generally *Telecommunications Relay Services and Speech-to-Speech for Individuals with Hearing and Speech Disabilities*, Letter Order, 32 FCC Rcd 3016 (CGB 2017) (waiving the Commission's requirement for calls to be answered within a specified time period, after severe storms destroyed a call center staffed by 225 CAs); see also MachineGenius Application at 8-9.

¹⁶⁸ See MITRE Phase 2 Summary at 13 (Table 5: Device Testing Percentile Raking by Provider for Bank Test Calls) (showing that an ASR engine performed above average, in terms of accuracy, compared to certain IP CTS providers).

¹⁶⁹ Microsoft describes recent advances in speech recognition as a "technological leap," noting that as a result of "Deep Neural Networks," its speech translation is now "[m]ore robust to noise, speaker variation and accents." Letter from Lissa Shook, Senior Attorney of Regulatory Affairs, Microsoft, to Marlene Dortch, Secretary, FCC, CG Docket No. 03-123, Attach. at 7-8 (filed Oct. 17, 2017) (Microsoft *Ex Parte*); see also W. Xiong et al., *Achieving Human Parity in Conversational Speech Recognition*, Microsoft Research Technical Report MSR-TR-2016-71, at 1 (Feb. 2017), <https://arxiv.org/pdf/1610.05256> (noting that recent testing achieved word error rates on par with human transcription word error rates for similar conversation types).

¹⁷⁰ Microsoft *Ex Parte* at 2 (citing Microsoft Research Blog, "Microsoft researchers achieve new conversational speech recognition milestone" (Aug. 20, 2017), <https://www.microsoft.com/en-us/research/blog/microsoft-researchers-achieve-new-conversational-speech-recognition-milestone/>). Microsoft notes that it can improve accuracy by adding specific technical and other vocabulary and jargon to its speech engine, and can improve readability of the text output through its sentence segmentation feature, which enables its Microsoft Translator to add sentence breaks, punctuation, and capitalization. *Id.* at 1. It has also been suggested that on an IP CTS call, accuracy can be further enhanced if the ASR-produced captions are transmitted simultaneously to *both* parties to a

improvements in accuracy, coupled with ASR's advantages in speed and privacy, have made ASR a viable alternative to the use of human relay intermediaries for CTS and IP CTS.¹⁷¹ In fact, IP CTS providers and others have shown heightened interest in utilizing this method for the provision of captions,¹⁷² and the Commission has received two applications for certification to provide IP CTS using ASR.¹⁷³ Additionally, ASR-only products are being trialed and adopted internationally as a means of generating captions from speech, for people with hearing and speech disabilities.¹⁷⁴

52. We understand that for a period of time, ASR-provided IP CTS will remain a nascent form of the service, and that there are various factors that may influence its effectiveness for different calls.¹⁷⁵ For example, ASR may be more conducive to communication on certain categories of calls, such as calls to customer call centers, where there is likely to be less background noise and clearer articulation by call takers, or calls to friends, relatives and colleagues, who may be more aware of and sensitive to the user's hearing loss and the need to speak clearly. However, we do not think these are sufficient reasons to delay the introduction of ASR as a method of providing IP CTS. First, we are not mandating ASR as the sole means of offering IP CTS. Pursuant to this Declaratory Ruling, and consistent with past Commission and Bureau orders, IP CTS providers will be able to choose among three methods of providing Fund-supported IP CTS: (1) IP CTS using fully automated ASR; (2) IP CTS using CA-assisted ASR; and (3) stenographic-supported IP CTS. Consumers, in turn, will continue to be able to select an IP CTS provider based on the overall quality of service each provider offers by means of the available methods. Second, as IP CTS providers begin offering fully automated ASR, we will be able to gather data that can inform

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call, as such a feature can enable the speaker to correct captions if he or she detects that they have been erroneously transcribed by the ASR engine. *See* Letter from Terence Leahy and Edward Rose, HubCap, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 7 (filed Nov. 9, 2017) (HubCap Nov. 9, 2017 *Ex Parte*); Letter from Peter Hayes, CEO of VTCSecure, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 2 (filed Nov. 7, 2017) (VTCSecure Nov. 7, 2017 *Ex Parte*); RAZ Mobility Nov. 30, 2017 *Ex Parte*, Attach. at 4.

¹⁷¹ We acknowledge Sorenson's concern about the limitations that certain ASR engines could present for achieving parity with human performance in real-time telephone communications. Letter from John T. Nakahata, Counsel to CaptionCall, LLC, and Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123, 13-24, Attach. 2 at 5-9 (filed Nov. 28, 2017) (Sorenson Nov. 28, 2017 *Ex Parte*). However, some of the ASR technologies discussed in Sorenson's submission (e.g., Dragon NaturallySpeaking) have been superseded by what appear to be far more advanced ASR systems, and we remind Sorenson that even some of the CA-assisted forms of IP CTS that are currently in use rely on speech recognition programs that may have some of these limitations (e.g., long latencies).

¹⁷² *See, e.g.*, Letter from Paul C. Besozzi, Counsel to ClearCaptions, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 1 (filed July 3, 2017) (discussing ClearCaptions' efforts to develop ASR technology); HubCap Nov. 9, 2017 *Ex Parte* at 1; Letter from Robert Felgar, CEO, RAZ Mobility, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24, 03-123, at 1-2 (filed Nov. 17, 2017); Letter from John T. Nakahata, Counsel to CaptionCall, LLC and Sorenson Communications, LLC, to David Schmidt, TRS Fund Program Coordinator, FCC, CG Docket No. 13-24, at 1 (filed Dec. 21, 2017) ("CaptionCall is moving forward with the development of a fully automated speech recognition ('ASR') product"); Letter from Robert Felgar, CEO, RAZ Mobility, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24, 03-123, at 1 (filed Mar. 8, 2018).

¹⁷³ *See* VTCSecure Application (proposing the use of ASR on IP CTS calls with the ability to transfer to a CA if needed); MachineGenius Application (proposing the use of ASR as its exclusive method of handling IP CTS calls); *see also infra* para. 61 (discussing various ways to use ASR on IP CTS calls).

¹⁷⁴ *See, e.g.*, T-Meeting, Speech App about to Start a Revolution, <https://tmeeting.com/article/speech-app-about-to-start-a-revolution> (last visited May 15, 2018) (announcing that its ASR-based product, touted for its "accuracy, speed, and mobility," will be offered in Sweden by government agencies).

¹⁷⁵ *See generally* Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 1 at 1-4, Attach. 2 at 2 (noting various factors that can affect the accuracy of ASR, including accents, background noise, call context, age of the speaker, and available bandwidth); *see also* Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 1 at 3 (raising concerns about the ability of ASR to distinguish among multiple speakers that overlap in the same audio stream); VTCSecure Nov. 7, 2017 *Ex Parte* at 1 (suggesting that there are some scenarios in which ASR works well and others that are "not ideal").

our adoption of further measures to improve its utility. We further affirm that any provider offering ASR must ensure that its service complies with the mandatory minimum standards of Section 64.604 of our rules in order to obtain and retain certification to provide IP CTS.¹⁷⁶

B. Consistency with Commission Precedent

53. Although all variants of CTS and IP CTS to date have used CAs to facilitate the handling of calls, the use of ASR is consistent with the Commission's prior rulings authorizing CTS in both its analog and Internet forms. In approving CTS as a form of TRS eligible for compensation in 2003, the Commission broadly defined this service as one using "a device that allows the user to simultaneously listen to, and read the text of, what the other party has said, on one standard telephone line."¹⁷⁷ The Commission explained that this flexible definition would "avoid authorizing a particular proprietary technology" or "a particular functionality or service," and thereby ensure that TRS providers interested in offering CTS were "not bound to offer any particular company's service."¹⁷⁸

54. In its 2007 Declaratory Ruling approving compensation for IP CTS, the Commission maintained this flexible approach, by simply expanding the definition of CTS to include the provision of captioning via the Internet rather than the PSTN.¹⁷⁹ The Commission rejected any notion that the captions need to be "generated by voice recognition technology or any other particular way,"¹⁸⁰ explicitly declining to "set forth in greater detail how this service must be provided, as long as it meets applicable TRS mandatory minimum standards . . . and the captions are delivered via an IP network to the user fast enough so that they keep up with the speed of the other party's speech."¹⁸¹ The Commission added "that such service may be initiated, set up, and provided in numerous ways, including using specific telephone equipment or IP-enabled devices, and various combinations of the PSTN and IP-enabled networks."¹⁸²

55. Consistent with these rulings, the definition of IP CTS in our rules does not specify how captions must be generated, including whether they should be generated through automation or human assisted methods.¹⁸³ In this regard, the Commission already has approved two different forms of IP CTS, one that relies on automated speech recognition programs (assisted by CAs) to convert speech to captions during an IP CTS call, and a second that uses stenography to generate captions.¹⁸⁴ The only differences

¹⁷⁶ 47 CFR §§ 64.604 (mandatory minimum standards); 64.606(g) (requiring an annual report to demonstrate continued compliance); 64.606(b)(2) (denial of certification renewal for noncompliance); 64.606(e)(2) (suspension of revocation of certification for noncompliance); *see also infra* para. 60.

¹⁷⁷ 2003 CTS Declaratory Ruling, 18 FCC Rcd at 16127, para. 17.

¹⁷⁸ *Id.*

¹⁷⁹ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 388, para. 22.

¹⁸⁰ *Id.* at 389, para. 23.

¹⁸¹ *Id.* at 388, para. 22. The Commission further noted that one of the defining characteristics of IP CTS, like non-IP CTS, was that its operations had to be invisible to all parties to a call, that is, it needed to be provided in an automated way that did not require the parties to communicate directly with a CA.

¹⁸² *Id.*; *id.* at 389, para. 23 (noting that providers could generate captions, for example, by typing, "as long as the captions are generated quickly to appear on the consumer's device nearly simultaneously with the speech"). It was this flexibility that, in 2014, resulted in a conditional grant of certification to Miracom to provide IP CTS. Miracom uses stenographers to transcribe the voice portions of an IP CTS conversation. *Miracom Conditional Certification*, 29 FCC Rcd 5105.

¹⁸³ 47 CFR § 64.601(a)(17) (defining IP CTS as "[a] telecommunications relay service that permits an individual who can speak but who has difficulty hearing over the telephone to use a telephone and an Internet Protocol-enabled device via the Internet to simultaneously listen to the other party and read captions of what the other party is saying").

¹⁸⁴ *Miracom Conditional Certification*, 29 FCC Rcd at 5106. Thus, we disagree with Hamilton that a notice-and-comment period is needed before we recognize that the provision of IP CTS using ASR to generate captions is compensable from the TRS Fund. *See* Hamilton May 24, 2018 *Ex Parte* at 1; Letter from David A. O'Connor,

between ASR and the first of these methods are that in CA-assisted ASR, CAs “train” speech recognition programs to understand their voices when they re-voice a caller’s speech, and have a limited opportunity to make corrections to the captions that are produced. Advancements in ASR reduce the need for such training and human editing, and use of this technology for IP CTS without CA involvement does not fundamentally change the functional role of the service, which is to produce captions from a user’s speech.

56. Finally, we note that although the TRS rules’ definition of “Internet-based” TRS (iTRS), which includes IP CTS, contains a reference to CAs,¹⁸⁵ the operative part of this definition focuses on the need for a caller to use the Internet to connect to TRS, rather than a requirement for a CA to be on every TRS call. Adopted in the Commission’s proceeding implementing ten-digit numbers for VRS and IP Relay, this definition merely was intended to distinguish between services that do and do not use the Internet, rather than to be prescriptive for future types of TRS.¹⁸⁶ Accordingly, the definition does not preclude the use of new forms of iTRS that are not reliant on CAs.¹⁸⁷

C. Statutory Authority

57. We conclude that using ASR for the provision of IP CTS is fully consistent with the Commission’s statutory authority and obligation to implement the TRS program for a number of reasons. First, section 225 of the Communications Act requires TRS to be functionally equivalent to voice telephone services.¹⁸⁸ As explained above, we conclude that the provision of IP CTS utilizing ASR will contribute to functional equivalence, by enabling providers to enhance the privacy, ensure seamless communications, and reduce the latency of IP CTS offerings.

58. Second, section 225’s definition of TRS is neutral as to the technology and method used to achieve functional equivalency.¹⁸⁹ Rather than require the intervention of CAs, this provision expressly requires the Commission to encourage technological innovation in TRS.¹⁹⁰ Specifically, section 225(d)(2) directs the Commission to ensure that TRS regulations “encourage . . . the use of existing

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Counsel for Hamilton Relay, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 2 (filed May 30, 2018) (Hamilton May 30, 2018 *Ex Parte*). As stated above, in declaring IP CTS a compensable form of TRS, the Commission consistently has adopted a flexible approach with respect to how captions may be generated to provide IP CTS. See *supra* para. 54 & note 182. Further, as technology advances, we have a statutory obligation to not discourage its continued development. 47 U.S.C. § 225(d)(2). Our ruling today allowing compensation for captions generated via software without human intervention helps ensure providers have sufficient incentive to continue the development of ASR.

¹⁸⁵ See 47 CFR § 64.601(a)(16) (defining iTRS as a service that connects an individual “to a TRS communications assistant using an Internet Protocol-enabled device via the Internet, rather than the [PSTN]”).

¹⁸⁶ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities Internet-based Captioned Telephone Service; E911 Requirements for IP-Enabled Service Providers*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 11591, 11592, para. 1, n.5 (2008) (*First TRS Numbering Order*) (concluding that IP CTS presented “distinct technical and regulatory issues,” and therefore deciding not to address IP CTS in that proceeding).

¹⁸⁷ See generally *Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, Second Report and Order and Order, 26 FCC Rcd 10898, 10899, para. 1 n.1 (2011) (*July 2011 iTRS Certification Order*) (noting that in the future, iTRS may include other forms of TRS that use an Internet connection, again emphasizing such connection, rather than the need for a CA).

¹⁸⁸ 47 U.S.C. § 225(a)(3).

¹⁸⁹ *Id.*; see also Sorenson Apr. 24, 2017 *Ex Parte* at 6 (agreeing that this statutory definition “is technology neutral and encompasses both human and machine-based relay services”).

¹⁹⁰ 47 U.S.C. § 225(d)(2). Thus, the fact that the Commission’s TRS rules contain numerous references to CAs, see Consumer Groups May 25, 2018 *Ex Parte* at 2, is not a reflection of a statutory mandate, but rather of the technology available at the time these rules were drafted.

technology and do not discourage or impair the development of improved technology.”¹⁹¹ Based on this authority, over the 25 years that the Commission has overseen the TRS program, the Commission’s definition of relay services has steadily evolved, as new and innovative technologies have been developed. TRS has grown from a service that was entirely text-based, and delivered via TTYs and the PSTN, to a service that makes full use of the Internet and can meet a wide array of individualized needs, for example, though VRS (for sign language users), STS (for people with speech disabilities), and, as addressed in this proceeding, forms of CTS (for individuals with some, but not enough, hearing to understand a telephone conversation). Our action today is consistent with this statutory authority and Commission precedent.

59. Third, offering an ASR option that will largely eliminate personnel costs associated with IP CTS will help fulfill Congress’s directive to provide TRS in the most efficient manner.¹⁹² This will not only reduce the current cost burden on TRS Fund contributors, but also provide greater security for the TRS Fund, whose viability has been threatened by the exponential growth of IP CTS over the past few years.¹⁹³ This, in turn, will help ensure that IP CTS service will remain viable for the millions of people with hearing loss who depend on this service for access to telephone communication.

D. Provider Certification and Other Requirements

60. By this ruling, we authorize the Bureau to review and approve applications for certification to provide IP CTS by means of ASR in whole or in part, when the Bureau determines that an applicant is able to provide IP CTS in accordance with the Commission’s mandatory minimum TRS standards designed to ensure functional equivalency.¹⁹⁴ For example, except as otherwise waived,¹⁹⁵ certified IP CTS providers using ASR must be capable of handling all types of calls,¹⁹⁶ and must ensure that conversations are kept confidential,¹⁹⁷ are transmitted verbatim¹⁹⁸ in real time,¹⁹⁹ and without intentional alteration to their content.²⁰⁰ In addition, such providers must meet applicable technical standards, including requirements for their services to be available 24 hours a day,²⁰¹ to comply with the Commission’s specified speed of answer,²⁰² and to have redundancy features, including uninterruptible

¹⁹¹ 47 U.S.C. § 225(d)(2).

¹⁹² *Id.* § 225(b)(1).

¹⁹³ *See supra* para. 8 (discussing the growth of the TRS Fund).

¹⁹⁴ As with all federal grants of TRS certification, each grant of certification will have a duration of five years and may be extended for additional five-year terms if renewal is granted. 47 CFR § 64.606(c)(2).

¹⁹⁵ As a form of IP CTS, ASR is subject to the waivers and exemptions previously granted for IP CTS. *See 2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 391-93, paras. 29-30; *2014 iTRS Waiver Order*, 29 FCC Rcd 10703-22, paras. 10-56. References to the Commission’s operational, technical, and functional minimum standards for TRS in this paragraph are intended to be illustrative only, and not intended to be exhaustive of all of the Commission’s mandatory minimum standards for ASR-provided IP CTS. *See* 47 CFR § 64.604 (“Mandatory Minimum Standards”); *id.* § 64.604(d) (citing other provisions of Part 64 that “are to be considered mandatory minimum standards”).

¹⁹⁶ 47 CFR § 64.604(a)(3).

¹⁹⁷ *Id.* § 64.604(a)(2)(i).

¹⁹⁸ *Id.* § 64.604(a)(2)(ii).

¹⁹⁹ *Id.* § 64.604(a)(1)(vii).

²⁰⁰ *Id.* § 64.604(a)(2)(ii).

²⁰¹ *Id.*

²⁰² *Id.* § 64.604(b)(2).

power.²⁰³ Certified providers must also meet the Commission’s functional standards, requiring, among other things, the submission of data to determine Fund revenue requirements and payments.²⁰⁴ In addition, IP CTS providers using ASR must commit to compliance with our rules to safeguard the TRS Fund against fraud, waste, and abuse. These include, but are not limited to, compliance with audits and on-site inspections,²⁰⁵ the production of records upon request,²⁰⁶ the filing of annual reports, notification to the Commission upon substantive changes in the provider’s service, consent to on-site visits, and obligations pertaining to the temporary cessation of service.²⁰⁷ Finally, as with all forms of IP CTS, providers using ASR must demonstrate that their services support 911 emergency calling and meet the applicable emergency call handling requirements.²⁰⁸

61. There appear to be a number of ways in which ASR might be integrated into IP CTS. As an alternative to using ASR to generate all captions for a call, IP CTS providers have suggested “hybrid” methods that would allow consumers or providers to switch back and forth between CA-assisted captioning and a fully automated speech engine, as needed on a call.²⁰⁹ As one such option, a call might begin with captions generated by ASR as the “default” setting, and give the IP CTS user the opportunity to press a button to switch to a CA at any point during the call if he or she needs additional communications assistance. A second option is for the provider to make its own determination, based on certain criteria, as to which captioning method is appropriate for a given call. For example, the provider might begin a call with the CA in attendance, but have the CA drop off after developing confidence that the ASR engine is providing a sufficient level of accuracy.²¹⁰ Some ASR-provided IP CTS providers also may be able to deliver captions simultaneously to both parties to the call, enabling the speaker to see and, if necessary, correct the text that the speech engine produces.

62. We do not, at this time, prescribe the specific manner in which a provider must use ASR in order to be certified. Rather, in reviewing specific certification applications, the Bureau may determine on a case-by-case basis the extent to which an applicant’s proposed method of providing ASR will enable it to provide IP CTS in a manner that meets the Commission’s minimum TRS standards for functionally equivalent service. To assist the Bureau in making this assessment, where a hybrid method is proposed—

²⁰³ *Id.* § 64.604(b)(4)(ii).

²⁰⁴ *Id.* § 64.604(c)(5)(iii)(D)(1).

²⁰⁵ *Id.* § 64.604(c)(5)(iii)(D)(6).

²⁰⁶ *Id.*

²⁰⁷ *Id.* § 64.606; *July 2011 iTRS Certification Order*, 26 FCC Rcd at 10914-22, paras. 37, 40, 42-48, 51-56; *see also Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, Memorandum Opinion and Order, Order, and Further Notice of Proposed Rulemaking, 26 FCC Rcd 14895 (2011) (*iTRS Certification Clarification Order*).

²⁰⁸ *See* 47 CFR § 64.605(a); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers*, Report and Order, 23 FCC Rcd 5255, 5263 n.59 (2008); *see also* Hamilton May 24, 2018 *Ex Parte* at 2; Hamilton May 30, 2018 *Ex Parte* at 2; Sorenson May 29, 2018 *Ex Parte* at 9 & n.45; Consumer Groups May 25, 2018 *Ex Parte* at 4. We note that the Commission previously has acted to withhold compensation and suspend certification for IP CTS providers that failed to operate IP CTS in compliance with the Commission’s emergency calling requirements. *See, e.g., Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Purple Communications, Inc., Request for Review of Withholding of TRS Payments*, Order, 29 FCC Rcd 13716 (CGB 2014); *Misuse of Internet Protocol (IP) Captioned Telephone Service et. al.*, Order, 30 FCC Rcd 2934 (CGB 2015) (temporarily suspending InnoCaption Inc.’s certification).

²⁰⁹ *See generally* Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 2 at 8 (recommending a hybrid system that would allow identification of certain calls as suitable for ASR, while allowing humans to handle all other calls).

²¹⁰ *See* VTCSecure Nov. 7, 2017 *Ex Parte* at 2. Conversely, it may be possible for a call to begin with ASR and switch to CA assistance if there is an effective way for the ASR program to determine that accuracy has dropped below a threshold “confidence” level.

i.e., use of ASR in conjunction with CA-assisted caption generation—applicants should include in their certification applications a detailed description of the criteria that will be used to determine when to use and transfer between each of these methods.

63. In accordance with our rules, applicants should support all claims regarding their use of ASR and its efficacy through documentary and other evidence.²¹¹ For example, this could include trials and quantitative test results demonstrating that the applicant’s service will afford a level of quality that is at least comparable to currently available CA-assisted IP CTS with respect to captioning transcription delays, accuracy, speed, and readability.²¹² Additionally, it is our understanding that, in an effort to improve ASR accuracy, certain companies are engaged in research that applies network algorithms to the content of users’ speech, which is sometimes captured in the Internet “cloud.”²¹³ Commission rules prohibit the disclosure of call content and the retention of records of any TRS call beyond the duration of the call.²¹⁴ We ask applicants for ASR certification to provide information about measures they will take to ensure the confidentiality of call content transcribed through an automated speech engine to ensure compliance with this rule. We also make clear that the Bureau will not approve any application to provide IP CTS using ASR that does not demonstrate that the applicant will meet the Commission’s mandatory minimum standards for functional equivalency, including those on confidentiality of IP CTS calls.²¹⁵ Thus, even if it is true that “there remain some areas in which [ASR] technology does not [currently] perform as needed” to meet the FCC’s mandatory minimum and 911 requirements,²¹⁶ any certification application relying on such deficient technology will not be approved. Furthermore, while we are seeking more information about ASR technology in the FNPRM portion of this item, we do not agree that an ASR provider cannot be certified until we conduct “further study” of such data.²¹⁷ Whatever such general data might ultimately reveal, we here make clear that no application to provide ASR will be approved unless the applicant demonstrates that the specific ASR technology described in the application

²¹¹ See 47 CFR § 64.606(a)(2)(ii) (requiring the submission of documentary and other evidence showing how the applicant will meet all non-waived minimum TRS standards); *id.* § 64.606(b)(2) (requiring, as a criterion of certification, that such documentation establish that the applicant’s provision of TRS will meet or exceed all minimum TRS standards).

²¹² See Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 2 at 5 (suggesting that readability impacts the usefulness of captions on an IP CTS call, and can be affected by punctuation and capitalization, and that real-time conversations become more difficult, and the benefit to users with some hearing decreases, as the lag time between the audio and the transcriptions increases); see also Sorenson May 29, 2018 *Ex Parte* at 8 n.43 (suggesting we mandate the submission of such trials and quantitative test results). Of course, applicants may also explain how their services can exceed metrics achieved by current forms of IP CTS.

²¹³ See, e.g., Google Cloud, *Cloud Speech-to-Text*, <https://cloud.google.com/speech/> (last visited May 11, 2018).

²¹⁴ 47 CFR § 64.604(a)(2); see also 47 U.S.C. § 225(d)(1)(F) (requiring TRS call confidentiality).

²¹⁵ See Consumer Groups May 25, 2018 *Ex Parte* at 4-5. Specifically, we do not, through this action, approve or prejudice any pending or future application for certification to provide IP CTS by means of ASR. To fulfill our statutory obligation for IP CTS to be provided in a functionally equivalent manner, see 47 U.S.C. § 225(a)(3), each application will be independently reviewed (regardless of the means of providing this service) to determine whether the proposed provision of IP CTS will meet the mandatory minimum standards for functional equivalency. See Sorenson May 29, 2018 *Ex Parte* at 8-9 (asserting that the Commission should utilize a robust certification process to ensure ASR is ready before approving certification); Consumer Groups May 25, 2018 *Ex Parte* at 2-4 (urging the Commission to make clear that it will not approve ASR-based IP CTS that does “not deliver functionally equivalent quality and protect the privacy and confidentiality of consumers with disabilities”). The Bureau may seek public comment on applications to the extent necessary to complete the determinations required to grant or deny certification. See Consumer Groups May 25, 2018 *Ex Parte* at 4 (urging the Commission to “put out on public notice and solicit public comment on all IP CTS applications . . . to ensure that quality and privacy issues are not overlooked”).

²¹⁶ Sorenson May 29, 2018 *Ex Parte* at 8.

²¹⁷ See *id.*

meets applicable FCC requirements.

64. As is true for iTRS certifications generally, certifications for the provision of IP CTS using ASR may be granted on a conditional basis, to enable the Commission's assessment, *e.g.*, through on-site inspections, of an applicant's actual performance in meeting or exceeding the mandatory minimum standards.²¹⁸ In addition, to the extent deemed necessary, certification of a provider may be conditioned on the submission of periodic data to help confirm whether ASR-driven IP CTS is providing functionally equivalent service.²¹⁹

65. *Currently Certified Providers.* We understand that some currently operating IP CTS providers may have an interest in utilizing ASR as one means of generating captions. If a currently operating IP CTS provider wishes to incorporate ASR in its offerings, it must first receive approval from CGB to provide IP CTS in this manner. In order to obtain approval, any provider operating under conditional certification or interim eligibility²²⁰ must update its application for permanent certification to describe the change, and may be asked to provide additional data—beyond what was submitted in its initial application for certification—to demonstrate how modifications to its service will ensure the provision of a relay service that is functionally equivalent to voice telephone service through compliance with the Commission's mandatory minimum standards.²²¹

E. Compensation

66. In the Further Notice of Proposed Rulemaking below, we seek comment on whether, and if so, how to modify the IP CTS compensation rate for calls using ASR. We nonetheless take this opportunity to remind all providers that our rules require TRS providers seeking compensation from the TRS Fund to “provide the administrator with true and adequate data, and . . . information reasonably requested to determine the TRS Fund revenue requirements and payments.”²²² To end any potential controversy, we clarify that requests from the TRS Fund administrator for information that would help establish whether payments are justified and help determine the costs for ASR IP CTS could reasonably include:

- A breakdown, in the provider's monthly call detail report (CDR), indicating minutes for which ASR is substituted for CA-assisted IP CTS;

²¹⁸ *July 2011 iTRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37; *see also Miracom Conditional Certification*, 29 FCC Rcd at 5107.

²¹⁹ For example, as it did for Miracom, the Bureau may request quarterly reports on the speed, accuracy, and latency of captioned text generated by the applicant's ASR. *See Miracom Conditional Certification*, 29 FCC Rcd at 5107 (directing Miracom to conduct testing on the speed and accuracy of captioned text and to submit quarterly reports on the protocols for and results of all tests and measurements to assess these indicia).

²²⁰ *July 2011 iTRS Certification Order*, 26 FCC Rcd at 10922, para. 59.

²²¹ *See July 2011 iTRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37. All IP CTS providers currently offering service have either conditional Commission certification or interim eligibility. Accordingly, all IP CTS providers have pending applications for full certification and are under an obligation to demonstrate that their provision of ASR meets the Commission's mandatory minimum standards adopted pursuant to the Communications Act. In addition, they remain subject to the Commission's assessment of the applicant's actual performance in meeting or exceeding the mandatory minimum standards. *July 2011 iTRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37; *see also Miracom Conditional Certification*, 29 FCC Rcd at 5107. Therefore, we disagree with Hamilton's assertion that this Declaratory Ruling fails to ensure that the provision of ASR by IP CTS providers will comply with statutory requirements. Hamilton May 30, 2018 *Ex Parte* at 4.

²²² *See* 47 CFR § 64.604(c)(5)(iii)(D)(1). To provide some additional certainty to IP CTS providers regarding what information may be collected in the future, in the Further Notice, we propose to amend this data collection rule to specify certain categories of required information regarding ASR. *See infra* para. 97.

- Estimates of the difference in the costs incurred to handle ASR and CA-assisted calls, with a detailed breakdown of the specific variable costs incurred for each type of call, as well as underlying assumptions and calculations; and
- Documentation of incremental costs incurred in providing ASR, including any incremental costs associated with engineering and technical implementation, marketing, administrative and management support (including oversight, evaluation, and recordkeeping) and, for hybrid forms of IP CTS, any costs associated with enabling transfers back and forth between ASR and CA-assisted IP CTS.²²³

V. FURTHER NOTICE OF PROPOSED RULEMAKING

67. In this Further Notice of Proposed Rulemaking, we propose further changes to the rules and compensation structure for the IP CTS program to enable us to more effectively and efficiently administer and support this service and prevent waste, fraud, and abuse. In Parts V.A through C, we seek comment on additional measures to improve the compensation plan, funding, and structure of the IP CTS program. In Part V.D, we propose to amend our rules to clarify requirements for provider practices, to minimize the risk of inappropriate IP CTS use and ensure that only eligible individuals sign up for the service.

A. IP CTS Compensation

68. In recent years, IP CTS demand has exploded from approximately 29 million minutes in 2011 to 362 million minutes in 2017. During the same period, because IP CTS minutes have been compensated under the MARS Plan, compensation paid to IP CTS providers has greatly exceeded the average reasonable cost of providing this service. Between 2011 and 2017, according to Rolka Loube, the MARS rate increased from \$1.763 to \$1.9467 per-minute, while average allowable IP CTS expenses dropped from \$2.0581 to \$1.2326.²²⁴ As a consequence, for 2017, the MARS rate generated average profits for IP CTS providers of approximately 58%, or \$262 million, far in excess of a reasonable operating margin.²²⁵ In part because of this excessive compensation rate, payments to IP CTS providers from the TRS Fund, which Rolka Loube has projected to be almost \$1 billion in 2018-19, are putting ever increasing pressure on a declining TRS Fund contribution base—pressure that sooner or later, if unchecked, will threaten the viability of the TRS program itself.

69. To address this widening gap between compensation and reasonable costs, in the Report and Order, we end reliance on the MARS Plan methodology and take interim steps to move the compensation rate closer to average costs, reducing compensation over a two-year period from the \$1.9458 rate in effect in 2017-18 to a \$1.58 rate for the 2019-20 Fund Year. Here, we seek comment on how to set IP CTS compensation rates²²⁶ following this interim period, to allow recovery of reasonable provider costs and ensure that IP CTS is provided in the most efficient manner.²²⁷

70. In the VRS and IP Relay contexts, the Commission previously has approved the use of average provider costs to set per-minute compensation rates for a multi-year rate period, finding that this

²²³ We disagree with Hamilton's characterization that the Commission is empowering the TRS Fund administrator to set interim rates for ASR IP CTS. See Hamilton May 24, 2018 *Ex Parte* at 3; Hamilton May 30, 2018 *Ex Parte* at 4. The FNPRM seeks comment on an appropriate rate for IP CTS provided using ASR. See *infra* paras. 96-100.

²²⁴ *Supra* para. 18 & Table 1.

²²⁵ 2017 TRS Rate Report at 19, Exh. 1-3.1. $\$1.9467 \div \$1.2326 = 1.5793$. See *supra* para. 23 (discussing reasonable operating margin for the purpose of setting interim compensation rates).

²²⁶ In Part V.A.1-V.A.3, we seek comment on compensation for current forms of IP CTS, which uses CA to produce captions. In Part V.A.4, we seek comment on compensation for IP CTS that is provided using ASR, without CA assistance.

²²⁷ 47 U.S.C. § 225(b)(1).

approach can simplify the rate-setting process, facilitate TRS provider planning and budgeting, and provide incentives for providers to increase their efficiency through innovation and cost reduction.²²⁸ For the same reasons, we propose to apply a multi-year approach for IP CTS. We seek comment on the costs and benefits of this proposal, including comments on: (1) the reasonableness and allowability of certain provider costs; (2) the specifics of setting a cost-based rate, including issues concerning extension of the “glide path,” use of rate tiers, the duration of the rate period, and within-period rate adjustments; (3) alternative approaches; and (4) compensation for IP CTS using full ASR.

1. Identifying Eligible IP CTS Costs

71. In the Report and Order, we set interim rates based on current information about IP CTS costs and on prior Commission determinations as to the categories of “reasonable” costs that TRS providers are permitted to recover from the TRS Fund. However, there are a number of cost issues that need to be addressed more specifically in the IP CTS context. We seek comment on these issues below.

72. We seek comment on the reasonableness of the costs currently reported by IP CTS providers. Do these reported costs, in the aggregate, accurately reflect the actual average costs of providing this service? Below, we discuss whether the Commission should consider placing caps on allowable costs for outreach and marketing. Should the Commission consider placing caps on any other cost categories? Further, should the Commission refine these categories in any way, for example, by requiring providers to provide more detail regarding their indirect expenses? Table 2 shows the average expenses for each category of IP CTS costs, as reported to and analyzed by Rolka Loube, for calendar years 2015 through 2018.

²²⁸ 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20162-63, 20169-70, paras. 42-43, 56; 2013 VRS Reform Order, 28 FCC Rcd at 8695-96, para. 191; 2017 VRS Compensation Order, 32 FCC Rcd at 5911-12, 5913-14, paras. 40, 45.

Table 2²²⁹

Category	2015 (Actual)	2016 (Actual)	2017 (Actual)	2018 (Projected)
Facilities	\$0.0386	\$0.0322	\$0.0249	\$0.0252
CA Related	\$0.2819	\$0.2672	\$0.2771	\$0.3160
Non-CA Relay Center	\$0.0559	\$0.0487	\$0.0500	\$0.0521
Indirect	\$0.2830	\$0.1520	\$0.1487	\$0.1626
Depreciation	\$0.0402	\$0.0276	\$0.0254	\$0.0259
Marketing	\$0.0579	\$0.0759	\$0.0869	\$0.0879
Outreach	\$0.0903	\$0.0668	\$0.0466	\$0.0543
Other	\$0.6259	\$0.5981	\$0.5730	\$0.5932
Total Expenses	\$1.4739	\$1.2684	\$1.2326	\$1.3172

73. *Subcontractor Expenses.* Expenses reported in the “Other” category, which currently average about \$.58 per minute—about 45 percent of the total—consist mainly of undifferentiated “subcontractor expenses.” Given this unusually large proportion²³⁰ and the difficulty in identifying and assessing the reasonableness of such costs, in the Report and Order we direct the TRS Fund administrator to collect additional information from IP CTS providers to assess their reasonableness and allowability.²³¹ However, a more effective way to review and audit such costs may be to collect information from the subcontractors themselves. Here, we seek comment on whether the Commission has the authority to, and should, require such subcontractors to submit directly to the TRS Fund administrator their underlying cost data for the fees charged to certified IP CTS providers, in accordance with the administrator’s instructions and TRS cost categories, to ensure that the reported costs can be reviewed for their accuracy, appropriateness, and reasonableness. As an alternative, we seek comment on whether to amend our rules to provide that, in the event that a subcontractor accounts for more than a certain threshold percentage of a certified IP CTS provider’s total costs, the subcontractor itself shall be deemed a TRS provider and be required to submit an application for certification showing its qualifications to provide service meeting the Commission’s minimum standards. We also seek comment on what the appropriate threshold percentage should be for such a requirement. To aid us further in assessing how to address this issue, we invite providers and subcontractors to submit information in this proceeding about the specific subcontractor services provided or received and the basis on which fees for specific services provided by subcontractors should or should not be deemed reasonable costs of providing IP CTS.²³²

74. *Licensing Fees.* According to Rolka Loube, \$0.5730 or 46 percent of average 2017 IP CTS provider expenses are subcontractor payments reported in the “Other” category.²³³ We believe a significant portion of these subcontractor payments represent licensing fees charged to providers for the use of patents and other intellectual property.²³⁴ As background, when CTS was first authorized in 2003, the Commission recognized that the service was offered at that time solely by Ultratec, Inc. (Ultratec),

²²⁹ See 2018 TRS Rate Report, Rev. Exh. 1-3. The totals given in Table 2 are for expenses only and do not include return on investment or operating margin.

²³⁰ Based on our review of public information, the costs attributable to the “Other” category have not exceeded 3.4% since 2010 for the VRS and IP Relay programs.

²³¹ See *supra* para. 36.

²³² We would afford such filings confidential treatment on request for a protective order.

²³³ 2018 TRS Rate Report, Rev. Exh. 1-3.

²³⁴ See *supra* para. 36.

using its proprietary technology.²³⁵ In authorizing IP CTS in 2007, the Commission continued to express concern about the consequences of a single company having control of CTS technology. The Commission stated an expectation “that this will not be a service under the control of one vendor or provider” and conditioned its approval of the proposed IP CTS offering on “Ultratec’s representation that it will continue to license its captioned telephone technologies, including technologies relating to IP CTS, at reasonable rates.”²³⁶

75. We seek comment on the circumstances under which license fees paid for technology used to provide IP CTS should be included in allowable costs, and on what method the Commission should use to determine whether license fees for such technology are “reasonable.”²³⁷ Should we cap “reasonable” licensing fees for such technology, and at what level? In deciding on a method or cap for reasonable license fees, should we consider that this technology is used for a service that is paid for through an FCC fund, and for which there is no bargaining by users as to its price? Should we also consider the extent to which a single company controls intellectual property that is needed for certain forms of IP CTS, effectively compelling providers to use a proprietary technology, as well as the extent to which there are economic barriers that prevent providers from easily switching technologies—such as providers being locked into proprietary user devices and servers, or having long-term supply contracts with the owner of the technology?²³⁸ To aid this inquiry, we invite parties to submit quantitative data (which may be accompanied by a request for a protective order) on the license fees they currently pay for specific types of IP CTS technology.

76. We also seek comment on Sorenson’s proposal that allowable IP CTS costs should include the imputed value of intellectual property developed by the IP CTS provider itself.²³⁹ Given that the Commission currently allows TRS providers to recover as an allowable expense the research and development costs incurred to ensure that a relay service meets minimum TRS standards, is it ever appropriate to permit a provider to *also* recover the imputed *value* of the resulting intellectual property? Would such a rule be consistent with using a methodology that is based on compensating providers for their actual reasonable costs?²⁴⁰ Sorenson also contends that license fees, based on imputed value and paid by an IP CTS provider to its own affiliate for intellectual property developed by the IP CTS provider and then transferred to the affiliate, should be deemed reasonable IP CTS expenses.²⁴¹ Should the Commission’s Part 32 rule on affiliate transactions of common carriers continue to apply in such cases?²⁴²

²³⁵ 2003 CTS Declaratory Ruling, 18 FCC Rcd at 16122, 16127, 16129, paras. 3, 17, 23. The Commission expressly stated, however, that it was defining CTS in functional terms so that TRS providers choosing to offer CTS “are not bound to offer any particular company’s service.” *Id.* at 16127, para. 17.

²³⁶ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 389, para. 24.

²³⁷ *Id.*

²³⁸ In multiple pending proceedings in federal court and before the Patent Trial and Appeal Board, Ultratec and CaptionCall are currently litigating the validity of various Ultratec patents and whether they are violated by CaptionCall’s IP CTS offerings. *See, e.g.*, https://portal.unifiedpatents.com/ptab/caselist?petitioners=captioncall%2C%20llc&sort=-filing_date (last visited May 11, 2018).

²³⁹ *See supra* para. 35. This argument, of course, presumes that litigation over whether the technology used by CaptionCall belongs to CaptionCall or Ultratec is resolved in CaptionCall’s favor.

²⁴⁰ *See supra* para. 18; 2017 VRS Compensation Order, 32 FCC Rcd at 5902, para. 21.

²⁴¹ *See supra* para. 35.

²⁴² 47 CFR § 32.27(b)-(d). The Part 32 rules are generally applicable to TRS providers. 1993 TRS Order, 8 FCC Rcd at 5305 (stating that for purposes of cost recovery by TRS providers, “existing accounting and separations rules should be adequate to deal with the provision of interstate TRS by subject service providers,” including those “who would not otherwise be subject to part 32 of the rules”); *id.* at 5307 (adopting rule requiring TRS providers to “provide the administrator with . . . total TRS operating expenses and total TRS investment in general accordance with Part 32 of the Communications Act”); 47 CFR § 64.604(c)(5)(iii)(D)(I). Under section 32.27, for an asset or

Is there any valid reason why the carrier affiliate transaction rule should not apply to a TRS provider, given the potential incentives for self-dealing and the difficulties of objective valuation?

77. *Outreach Expenses.* Commission rules require common carriers to conduct TRS outreach to “assure that callers in their service areas are aware of the availability and use of all forms of TRS.”²⁴³ In 2006, the Commission further explained that outreach is also intended to make “the public aware of the use and availability of TRS generally and encouraging hearing persons and merchants to stay on the line and accept relay calls.”²⁴⁴ More recently, in 2013, the Commission similarly determined that outreach for VRS and IP Relay should focus on “disseminat[ing] non-branded information to potential new-to-category users and to the general public about IP Relay and VRS, their purposes and benefits, and how to access and use these services.”²⁴⁵

78. For many years, however, the Commission has “raised concerns about the effectiveness of outreach efforts on the national level . . . both for TRS in general and for VRS in particular.”²⁴⁶ For example, in the *2013 VRS Reform Order*, the Commission found that most of the Fund resources reportedly used for “outreach” appeared to be devoted to branded marketing campaigns, which “focus primarily on efforts to win back TRS users from competitors.”²⁴⁷ Concluding that such activity is “ineffective as a means to effectively educate the public about the purpose and functions of TRS,”²⁴⁸ the Commission terminated the allowed recovery of outreach expenses by VRS and IP Relay providers, intending to centralize the outreach function at the national level.²⁴⁹

79. We seek comment on whether we should allow outreach expenses to be compensable from the TRS Fund as part of an IP CTS provider’s reasonable expenses. According to Table 2, outreach expenses for IP CTS currently average about \$.05 per minute. We invite IP CTS providers to describe the specific types of activities for which they report expenses in this category. In this regard, we recognize that there are differences between IP CTS on the one hand and VRS and IP Relay on the other. For example, while growth in VRS has been flat over the last several years, IP CTS minutes have continued to increase at extraordinary rates, resulting in more than tenfold growth in the last six years. In light of such

(Continued from previous page) _____

service purchased *from* a carrier *by* an affiliate, the imputed cost is the *higher* of fair market value and net book cost (or fully distributed cost, in the case of a service), unless the carrier sells at least 25% of the asset or service to third parties. 47 CFR § 32.27(b)(1), (c)(1), (d). This part of the rule would be relevant, for example, to determining an appropriate price when intellectual property developed by an IP CTS provider is purchased by an affiliate. In addition, the rule provides that the imputed cost for an asset or service purchased *by* a carrier *from* an affiliate is the lower of fair market value and net book cost (or fully distributed cost, in the case of a service), unless the affiliate sells at least 25% of the asset or service to third parties. *Id.* § 32.27(b)(2), (c)(2), (d). This part of the rule would be relevant, for example, to determining an appropriate licensing fee for intellectual property licensed to an IP CTS provider by its affiliate.

²⁴³ *Id.* § 64.604(c)(3). The TRS Fund administrator’s instructions currently define “outreach” as “an effort by individuals in an organization or group to connect its ideas or practices to the efforts of other organizations, groups, specific audiences or the general public,” and note that, “[u]nlike marketing, outreach does not inherently revolve around a product or strategies to increase market share.” 2017 TRS Rate Filing, Appx. B, Interstate TRS Fund Annual Provider Information (Provider Data Collection Form & Instructions), at 10.

²⁴⁴ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Further Notice of Proposed Rulemaking, 21 FCC Rcd 8379, 8394, para. 35 (2006) (*2006 TRS FNPRM*).

²⁴⁵ *2013 VRS Reform Order*, 28 FCC Rcd at 8637, para. 34.

²⁴⁶ *Id.* at 8632, para. 27.

²⁴⁷ *Id.* at 8635, para. 31.

²⁴⁸ *Id.*

²⁴⁹ *Id.* at 8634-39, 8696, paras. 31-39, 192. Regarding IP Relay, CGB has waived the rule to permit limited compensation for outreach costs incurred by the current IP Relay provider, for the specific purpose of conducting outreach to deaf-blind users. *2017 TRS Rate Order*, 32 FCC Rcd at 5145-46, paras. 9-13.

expansion, we seek comment on whether TRS-Fund supported outreach to potential new IP CTS users is currently needed to further the goals of section 225. Moreover, unlike VRS and IP Relay, IP CTS calls tend to not immediately be identifiable as relay calls to the non-caption-using party. In light of this, is outreach to the public needed to encourage hearing individuals to place or accept IP CTS calls to the same extent as is considered necessary for other forms of TRS? Finally, if we conclude that some outreach should be supported by the Fund, should we limit allowable outreach expenses to a specified percentage or amount, and, if so, what percentage or amount should that be?

80. *Marketing Expenses.* Marketing has been defined as branded advertising and other promotional activity aimed at encouraging the use of a particular provider's service.²⁵⁰ Marketing expenses are currently allowable for all three IP-based services, notwithstanding some previous concerns that the Commission has raised regarding their recoverability.²⁵¹ According to Table 2, marketing expenses for IP CTS currently average more than \$.08 per minute. We invite the providers to describe the specific types of activities for which they report expenses in that category. Given the history of inappropriate IP CTS marketing²⁵² and the susceptibility of this service to being used regardless of need,²⁵³ we are concerned about having the TRS Fund support marketing activities that have the potential to promote widespread use of the service by individuals who may not need it to obtain functionally equivalent telephone service. Therefore, we seek comment on whether compensation for marketing expenses should be disallowed or, in the alternative, limited. For example, should we cap such expenses at a specific level, and if so, what would be the maximum percentage of expenses or amount (e.g., per minute) that should be recoverable?

81. *Definitions.* Finally, in the event that we decide to treat marketing and outreach differently in terms of allowability, we seek comment on whether and how to provide more precise definitions of these two expense categories.²⁵⁴ In general, should the TRS Fund administrator's current definitions of "outreach" and "marketing" be modified, and if so, in what respects?²⁵⁵

82. *Operating Margin.* We seek comment on whether the operating-margin approach and zone of reasonableness established in the *2017 VRS Compensation Order* (and also used above in establishing interim IP CTS compensation rates) is appropriate for the purpose of setting an IP CTS rate for 2020-21.²⁵⁶ Are there any material differences between VRS and IP CTS that would justify a different

²⁵⁰ See *2006 TRS FNPRM*, 21 FCC Rcd at 8394-95, para. 36. The TRS Fund administrator's instructions state that marketing "is the wide range of activities involved in making sure that you're continuing to meet the needs of your customers and getting value in return," including (1) "inbound marketing," such as "market research to find out, for example, what groups of potential customers exist, what their needs are, which of those needs you can meet, how you should meet them, etc.," as well as "analyzing the competition, positioning your new product or service (finding your market niche), and pricing your products and services," and (2) "[o]utbound marketing," which "includes promoting a product through continued advertising, promotions, public relations and sales." 2017 TRS Rate Filing, Appx. B, Interstate TRS Fund Annual Provider Information (Provider Data Collection Form & Instructions), at 10.E. The instructions also define advertising as "a form of communication intended to persuade an audience (viewers, readers or listeners) to purchase or take some action upon products, ideas, or services," and state that advertising "includes the name of a product or service and how that product or service could benefit the consumer, to persuade a target market to purchase or to consume that particular brand." *Id.*

²⁵¹ *2006 TRS FNPRM*, 21 FCC Rcd at 8393-95, paras. 33-37.

²⁵² See, e.g., *2013 IP CTS Interim Order*, 28 FCC Rcd at 726-30, paras. 42-48; *2013 IP CTS Reform Order*, 28 FCC Rcd at 13442-43, para. 48.

²⁵³ See *supra* paras. 9-11.

²⁵⁴ See *2006 TRS FNPRM*, 21 FCC Rcd at 8394, para. 36 (seeking comment on appropriate definitions of outreach and marketing).

²⁵⁵ See *supra* notes 243 and 250.

²⁵⁶ See *2017 VRS Compensation Order*, 32 FCC Rcd at 5903-05, paras. 23-26; *supra* para. 23.

zone than the 7.6%-12.35% range established in the *2017 VRS Compensation Order*? Have there been changes in capital markets that would support moving the end-points of the range up or down? We also seek comment on where to set a specific allowed operating margin within the zone of reasonableness.²⁵⁷

83. *Historical vs. Projected Costs.* In the past, the Commission has raised concerns about the extent to which projected costs provide a reliable basis for setting TRS compensation rates. In the VRS context, the Commission has often resolved this issue by using a weighted average of providers' historical and projected per-minute costs to set compensation rates.²⁵⁸ The Commission recently found this blended approach to be a reasonably accurate predictor of actual VRS costs, and we have followed this approach in setting interim IP CTS rates.²⁵⁹ We seek comment on whether we should continue to use a weighted average of historical and projected costs in setting compensation rates for IP CTS. Should we take into account the extent to which projections line up with the historical cost trend, and whether there is an adequate explanation when projections deviate significantly from the historical trend?

84. *Further Adjustment of Interim Rates.* In the Report and Order, we set interim compensation rates for 2018-19 and 2019-20 based on previously approved categories of allowable TRS costs and on the information currently available regarding actual costs in the IP CTS context, with the goal of striking a reasonable balance between the need to bring rates in line with costs and reduce the TRS Fund contribution burden, on the one hand, and avoiding rate shock and potential service disruption, on the other.²⁶⁰ This underlying calculus, however, may change, if we determine, based on the record compiled in this rulemaking, that some costs have been incorrectly reported or are otherwise not "reasonable" for TRS Fund recovery. We seek comment on whether, in that event, the interim rates set in the Report and Order should be adjusted to take account of such determinations.

2. Moving to a Cost-Based Rate

85. Given our overall goal to ensure that IP CTS rates align with costs, we now seek comment on further measures for reaching this goal.

86. In the Report and Order, we reduce the compensation rate by 10 percent annually, to interim levels of \$1.75 for 2018-19 and \$1.58 for 2019-20, in order to begin a "glide path" toward a cost-based level, while recognizing that these interim rates will continue to allow providers, on average, an operating margin well above the 12.35 percent upper bound of the zone of reasonableness. We use as a reference point the TRS Fund administrator's current estimate of historical and projected IP CTS expenses for calendar years 2017 and 2018, which average \$1.28 per minute. If average allowable expenses were to remain at the \$1.28 level for the next two years, a cost-based rate could be reached in the 2020-21 Fund Year by a further rate reduction of roughly the same magnitude as the 10 percent reductions reflected in the interim rates. For example, assuming average expenses of \$1.28, if we were to allow a 12.35 percent operating margin, at the high end of the zone of reasonableness, the compensation

²⁵⁷ In the *2017 VRS Compensation Order*, the Commission concluded that "[a]lthough we believe it would strike a reasonable balance, if a more specific ruling were necessary, to select an allowed operating margin of 10%, which is approximately midway between [7.6% and 12.35%], it is unnecessary at this time to select a specific number within this zone because the tiered rates we set today will allow all VRS providers to recover their compensable expenses (i.e., the average of historical 2016 expenses and projected 2017 expenses) plus a reasonable operating margin." *Id.* at 5905, para. 26. In the Report and Order, we likewise do not find it necessary to pick a specific number within the zone for purposes of setting interim rates. *See supra* para. 23. As compensation rate is reduced closer to average provider costs, however, it will become necessary to settle on an allowed operating margin.

²⁵⁸ *See 2013 VRS Reform Order*, 28 FCC Rcd at 8696, 8703, paras. 191, 211 (setting VRS rates using a combination of projected costs and actual, historical costs); *2017 VRS Compensation Order*, 32 FCC Rcd at 5928-29, para. 69 (same). In particular, the Commission used an average of projected costs for the calendar year in which a rate is established and historical costs for the preceding calendar year. *2017 VRS Compensation Order*, 32 FCC Rcd at 5928-29, para. 69.

²⁵⁹ *See, e.g., 2017 VRS Compensation Order*, 32 FCC Rcd at 5928-29, para. 69; *supra* para. 23.

²⁶⁰ *See supra* para. 24.

rate for 2020-21 would be approximately \$1.44, a 9.0 percent reduction from the 2019-20 rate. If we were to allow a 7 percent operating margin, at the low end of the zone of reasonableness, the rate would be approximately \$1.37, 13.3 percent less than the 2019-20 rate. According to the historical cost trend, however, IP CTS costs have been consistently declining over time.²⁶¹ Further, we may decide that some previously reported costs should not be recoverable from the TRS Fund. For example, if we were to disallow all marketing and outreach expenses, allowable per-minute expenses would decline by approximately \$0.14, to \$1.14, resulting in a cost-based rate level between \$1.22 and \$1.28, depending on the allowed operating margin—a range that is 19 to 23 percent lower than the 2019-20 rate. If we were to disallow some or all license fees, a much larger reduction could result.

87. *Need for an Extended Glide Path.* To limit the short-term potential for undesirable loss of competitive alternatives and disruption of service to consumers, should we extend the interim-rate “glide path,” and if so, what should the extended glide path look like? In setting the interim rates in the Report and Order, we have found that a 10 percent reduction provided a reasonable “glide path” toward a cost-based rate. If IP CTS providers’ reasonable costs, as determined based on the record compiled following this Further Notice, are not substantially lower than the cost estimate we have used for the purpose of setting interim rates, it would appear that no extension of the glide path would be needed. We seek comment on this view. On the other hand, if reasonable provider costs prove to be substantially lower than the current estimate, what transition to a cost-based rate level would be appropriate to ensure a reasonable level of certainty and predictability for IP CTS providers while also ensuring the most efficient use of the TRS Fund? Would the fact that costs have been substantially lower than previously thought mitigate in favor of a longer or shorter glide path?

88. *Tiered Rates.* Some parties have previously expressed concern that, even if costs do not change, setting a compensation rate based on average cost may force some above-average cost providers out of the IP CTS market.²⁶² In order to encourage smaller competitors to remain in the market, while still narrowing the gap between total compensation and total IP CTS costs, would it be appropriate to adopt a tiered rate structure for IP CTS? In the past, the Commission has found that the use of a single rate based on weighted average costs is appropriate for TRS, despite the resulting pressure on less efficient providers. In various contexts, the Commission has found that this approach “creates strong incentives for TRS providers to offer high quality innovative services at reasonable cost.”²⁶³ Although the Commission has deviated from this principle in setting VRS rates, there are—in addition to economies of scale, which may exist for many forms of TRS—a number of underlying reasons specific to VRS that have justified maintaining a tiered rate structure, including long-term dominance of the VRS market by a single provider,²⁶⁴ major and growing disparities in providers’ per-minute costs, and a history

²⁶¹ See *supra* Tables 1 and 2. Although costs are projected to increase in 2018, past experience indicates that provider cost projections are not always reliable, and may be less reliable when prepared in anticipation of a major rate proceeding. Compare, e.g., 2017 TRS Rate Report, Exh.1-3.2 (showing projected 2017 IP CTS costs of \$1.3071) with 2018 TRS Rate Report, Rev. Exh. 1-3 (showing actual 2017 IP CTS costs of \$1.2435); see also 2010 TRS Rate Order, 25 FCC Rcd at 8694, para. 9 (finding “a comparative analysis by [the TRS Fund administrator of VRS] providers’ projected and actual cost and demand over the past several years reveals that there is a substantial disparity between providers’ reported projected costs and demand, and what turns out to be their actual costs and demand”).

²⁶² See, e.g., Hamilton Brattle Group Paper *Ex Parte* at 31-32; ClearCaptions Sept. 5, 2017 *Ex Parte* at 3; ClearCaptions Sept. 29, 2017 *Ex Parte*, Attach. 1 at 5.

²⁶³ 1993 TRS FNPRM, 8 FCC Rcd at 1806, para. 24; see also 2001 TRS Order, 16 FCC Rcd at 22951-52, paras. 8-9 & n.26; 2013 VRS Reform Order, 28 FCC Rcd at 8703, para. 211.

²⁶⁴ See 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20162-63, para. 52 (applying tiers to VRS rates); 2017 VRS Compensation Order, 32 FCC Rcd at 5906-07, para. 30 (noting that in 2013, for example, “Sorenson provide[d] about 80% of the VRS minutes logged every month”) (quoting *Sorenson 2014*, 765 F.3d at 42); see also 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20160, para. 46 (declining to adopt tiered rates for IP Relay,

of chronic interoperability problems and related structural issues, all of which have been found to hinder smaller VRS providers' ability to compete effectively with the largest provider.²⁶⁵

89. We seek comment on the extent to which unique factors are present in the IP CTS market that would make a tiered rate structure more appropriate than averaged compensation rates.²⁶⁶ For example, are there barriers to a smaller provider's ability to expand its share of the IP CTS market, despite the unusually fast growth in IP CTS demand? How would tiered rates affect provider incentives to operate more efficiently, improve service quality, or invest in new technology, such as ASR? Are there scale economies in IP CTS that would help identify where to set tier boundaries? In the event that the Commission does adopt tiered rates, how should the tiers be structured to reflect any such scale economies in IP CTS and avoid limiting a provider's incentive to increase their minutes above the next tier boundary? How should a tier structure be updated as the market evolves? How are the economies of scale different for IP CTS using ASR? Finally, how should a tiered structure take account of subcontracted operations?²⁶⁷

90. *Emergent Provider Rate.* For VRS, the Commission adopted a special "emergent provider" rate, applicable on a temporary basis for newly certified providers and certain other very small providers, in order to encourage new entry and provide appropriate growth incentives.²⁶⁸ Factors contributing to that decision included a desire to maintain VRS competition in an unbalanced market, the incompleteness of VRS reforms intended to support full interoperability, the extremely wide per-minute cost differentials among VRS providers, and the potential role of smaller providers in offering service features designed for niche VRS market segments.²⁶⁹ Are these or other factors present in the IP CTS context to justify the adoption of an emergent rate to encourage or assist competitive entry?²⁷⁰ If so, how should such a rate be designed and implemented?

91. *Rate Period.* We also seek comment on the appropriate duration of the next rate period. Should the duration be governed solely by the time it will take to reach a cost-based compensation rate—i.e., strictly based on the length of the "glide path" that we deem appropriate for transitioning to a cost-based level? Or should other factors be given weight, and if so, what rate period duration would appropriately balance the needs for administrative efficiency, rate certainty, and cost-reduction incentives with the need for a timely review of how IP CTS costs may change in the future, e.g., with the use of ASR?

92. *Price Cap Adjustments.* We seek comment on whether price-cap factors should be used, and on the appropriate indices to use to reflect inflation and productivity, once a cost-based level has been reached. To what extent should we follow the price cap approach we have used for IP Relay,²⁷¹ or approaches proposed to the Commission for IP CTS?²⁷²

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because, among other reasons, "there is not the same size disparity among IP Relay providers as there is with the VRS providers").

²⁶⁵ 2017 VRS Compensation Order, 32 FCC Rcd at 5905-06, paras. 28-29.

²⁶⁶ See Letter from John T. Nakahata, Counsel to CaptionCall, LLC, and Sorenson Communications, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 13-24, at 1 (filed Sept. 19, 2017) (Sorenson Sept. 19, 2017 *Ex Parte*); ClearCaptions Sept. 5, 2017 *Ex Parte* at 3; ClearCaptions Sept. 29, 2017 *Ex Parte* (contending that a smaller IP CTS provider may not be able to reduce its costs sufficiently to remain competitive as the compensation rate is adjusted to an average cost-based level).

²⁶⁷ See Sorenson Sept. 19, 2017 *Ex Parte* at 2.

²⁶⁸ 2017 VRS Compensation Order, 32 FCC Rcd at 5916-17, para. 49.

²⁶⁹ *Id.*

²⁷⁰ See also *infra* para. 97 (asking whether to adopt an emergent rate specific to the provision of IP CTS with ASR).

²⁷¹ 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20159-60, paras. 43-45.

93. *Exogenous Costs.* We seek comment on whether to allow adjustment of the compensation rate during the rate period based on exogenous costs, e.g., subject to the conditions adopted in the *2017 VRS Compensation Order*.²⁷³ Specifically, should IP CTS providers be permitted to seek compensation for well-documented exogenous costs that (1) belong to a category of costs that the Commission has deemed allowable, (2) result from new TRS requirements or other causes beyond the provider's control, (3) are new costs that were not factored into the applicable compensation rates, and (4) if unrecovered, would cause a provider's current allowable-expenses-plus-operating margin to exceed its IP CTS revenues?²⁷⁴ Would such allowance for exogenous cost adjustments sufficiently address provider concerns regarding compensation for unforeseeable cost increases (e.g., if the adoption of performance metrics affects providers' cost of service and generates a need for additional compensation)?²⁷⁵

3. Alternative Approaches

94. *Alternatives to Averaging Costs.* While the Commission generally has viewed an average-cost approach to rate-setting as beneficial because it encourages higher-cost providers to become more efficient,²⁷⁶ we seek comment on whether a different approach could better ensure that functionally equivalent IP CTS is provided "in the most efficient manner."²⁷⁷ For example, should we encourage greater efficiency by setting the compensation rate equal to the costs of the lowest-cost provider—or, to ensure that users have a choice of at least two providers, should we set the rate equal to the costs of the second-lowest-cost provider? In this regard, we note that in the VRS context the Commission has concluded that the presence of multiple competitors can be highly beneficial in ensuring the provision of functionally equivalent service.²⁷⁸ To the extent that competition is beneficial to ensuring functional equivalence for IP CTS, what is the optimal number of competitors to ensure that this is achieved "in the most efficient manner"?

95. *Alternatives to Setting Cost-Based Rates.* Finally, we seek comment on other approaches to IP CTS compensation that can successfully align the rates for this service with actual provider costs and enable the Commission to provide IP CTS in the most efficient manner. To the extent that commenters wish to suggest alternative market-based approaches that could simplify or otherwise improve the IP CTS compensation rate-setting process, we invite the submission of specific proposals, along with an explanation of how each proposal would successfully align the IP CTS compensation rate with actual provider costs and otherwise advance the objectives of section 225. For example, Sorenson has suggested consideration of holding a reverse auction to set a multi-year compensation rate for IP CTS.²⁷⁹ How should a reverse auction operate in this context? For example, how many providers should be selected in an auction to serve the IP CTS market, and why? If multiple providers are to be selected,

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²⁷² See *supra* note 96.

²⁷³ See *2017 VRS Compensation Order*, 32 FCC Rcd at 5925, para. 66.

²⁷⁴ *Id.*; see also *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20160, para. 44.

²⁷⁵ See *infra* Part VI (seeking comment on establishing objective, quantifiable, and measurable performance goals and service quality metrics).

²⁷⁶ See, e.g., *1993 TRS FNPRM*, 8 FCC Rcd at 1806, para. 24; *2001 TRS Order*, 16 FCC Rcd at 22952, para. 9 & n.26.

²⁷⁷ 47 U.S.C. § 225(b)(1).

²⁷⁸ *2017 VRS Compensation Order*, 32 FCC Rcd at 5907, para. 31; see also *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Order on Reconsideration, 20 FCC Rcd 20577, 20588, 20590-92, paras. 21, 26, 29 (2005) (*2005 TRS Order*).

²⁷⁹ Sorenson 2017 TRS Rate Filing Comments at 6 (suggesting that the Commission "seek comment on possible market-based solutions, such as holding a reverse auction to initialize a price cap for IP CTS rates").

how should bidders' market shares be determined?²⁸⁰ What would be the costs and benefits of using a reverse auction to set rates, compared to cost-of-service ratemaking?

4. Setting Compensation for ASR

96. We seek comment on setting a compensation rate for such IP CTS calls using ASR. First, we seek comment on whether to set separate rates for ASR-only IP CTS and CA-assisted IP CTS, or a single rate applicable to both. Would applying a single compensation rate to both forms of IP CTS appropriately encourage migration to a more efficient technology, or would it create an undesirable incentive for providers to overuse ASR where it is not the best choice for a particular call? How can we ensure that a single rate does not end up significantly over- or under-compensating providers?

97. If separate rates are applied, should compensation for ASR-only IP CTS calls be based on per minute intervals, as is done now for IP CTS and for CA-assisted TRS generally, or would it be more consistent with cost causation principles to compensate providers on a one-time or monthly per-user basis—or a combination of the two? If we maintain separate rates, when should an ASR-only IP CTS rate become effective? Should we use the same rate methodology and rate period for ASR-only IP CTS and CA-assisted IP CTS? Should we establish cost-based rates that use an operating margin?²⁸¹ Would tiered or emergent-provider rates be appropriate for ASR-only IP CTS?²⁸² Should we apply price cap adjustments?²⁸³ Would any of the alternative approaches discussed in this Further Notice be an appropriate rate methodology for ASR?²⁸⁴ What additional information, beyond that already required in annual provider cost reports, would be useful in determining an appropriate ASR-only IP CTS rate? How should we compensate IP CTS calls that use both ASR and human intervention? For example, should we limit application of the CA-assisted IP CTS rate to the portion of the call when a CA is actively involved in generating captions? We also seek comment on how to amend the data requirements for call detail records submitted with requests for compensation, to ensure that the TRS Fund administrator has all of the information necessary to apply the appropriate rate for calls involving ASR.

98. If separate rates are applied, which categories of provider costs are relevant to setting a rate for ASR? In its annual rate report for 2018, Rolka Loube recommends that the Commission establish a separate ASR compensation rate for IP CTS of \$0.49 per minute.²⁸⁵ Rolka Loube arrives at this rate by first disaggregating fixed IP CTS costs, projected for 2018-19 to average \$0.3659 per minute, from variable costs, which, for the same period, are projected to average \$0.9564 per minute. Rolka Loube then multiplies \$1.75 (Rolka Loube's recommended interim rate for CA-assisted IP CTS) by the ratio of fixed IP CTS costs to total IP CTS costs, and rounds up the result to \$0.49.²⁸⁶ We seek comment on this rate recommendation and methodology, and invite commenters to suggest alternative rate-setting methods and compensation rates for ASR-based IP CTS.

99. How should overhead and other common costs be allocated between CA-assisted and IP CTS provided using ASR? To what extent would it be appropriate to set the ASR-only IP CTS compensation rate higher than a cost-based level, to create incentives for providers to integrate ASR into their IP CTS platforms where functional equivalence can be achieved? For example, should we allow a higher operating margin in relation to underlying costs for ASR than for human-assisted IP CTS, and

²⁸⁰ See generally *2017 VRS Compensation Order*, 32 FCC Rcd at 5914-15, para. 46 (detailing concerns about applying a reverse auction approach in the VRS context).

²⁸¹ See *supra* paras. 72-87 (discussing costs, rate elements, and a cost-based approach).

²⁸² See *supra* paras. 88-90 (discussing a tiered rate structure and an emergent provider rate).

²⁸³ See *supra* para. 92 (discussing price cap adjustments).

²⁸⁴ See *supra* paras. 94-95 (discussing alternative approaches to averaging costs and setting cost-based rates).

²⁸⁵ 2018 TRS Rate Report at 23-25.

²⁸⁶ *Id.* at 24 & n.40.

what would be an appropriate amount for such additional margin? Conversely, to prevent use of ASR where it might compromise service quality, should we limit the allowance of a higher margin? Or should such an extra margin be diminished over time, based on an expectation of a reduced future need for special incentives to adopt this technology? If we provide a higher margin for ASR as an incentive, should we also make a corresponding downward adjustment in the operating margin for CA-assisted IP CTS, to avoid overcompensation for average costs?

100. Finally, to what extent would it serve the purposes of section 225 of the Act to modify the definition of allowable research and development expenses in order to ensure that ASR development costs are subject to compensation even if such research is not strictly necessary to ensure that a provider complies with the Commission's minimum TRS standards?²⁸⁷ Alternatively, to the extent that ASR development costs and other ASR start-up costs are not captured in the applicable compensation rate, should we treat such costs as exogenous costs, which may be reimbursed in the same manner and under the same criteria as other exogenous costs? What other factors should we consider in determining compensation for ASR-only IP CTS?

B. Restructuring the Funding of IP CTS

101. *Background.* To ensure effective cost recovery for TRS, Congress directed the Commission to prescribe TRS regulations governing the jurisdictional separation of the associated costs,²⁸⁸ which shall “generally provide that costs caused by interstate telecommunications relay services shall be recovered from all subscribers for every interstate service and costs caused by intrastate telecommunications relay services shall be recovered from the intrastate jurisdiction.”²⁸⁹ However, when the Commission approved IP CTS in 2007 as a type of TRS eligible for compensation from the TRS Fund, the Commission determined that, on an interim basis, all IP CTS minutes, both interstate and intrastate, would be supported by contributions from carriers' interstate revenues to the TRS Fund, consistent with the treatment of VRS and IP relay calls, and provision of the service would be directly supervised by the Commission.²⁹⁰ The Commission believed that direct FCC oversight of the provision and funding of IP CTS would encourage nationwide competition that could “enhance consumer choice, service quality, and available features,” but noted its intent to revisit the cost recovery methodology, including jurisdictional separation of costs, in the future.²⁹¹

²⁸⁷ See 2004 TRS Order, 19 FCC Rcd at 12547-48, paras. 189-90; 2013 VRS Reform Order, 28 FCC Rcd at 8629, para. 21.

²⁸⁸ 47 U.S.C. § 225(d)(3)(A).

²⁸⁹ *Id.* § 225(d)(3)(B); 47 CFR § 64.604(c)(5)(iii)(A). In addition, both international and VoIP service providers are required to contribute to the Fund. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling, 21 FCC Rcd 5247, 5250, para. 8 (CGB 2006) (international revenue contributions), *recon.*, 21 FCC Rcd 5962, 5963, para. 2 (CGB 2006); 47 U.S.C. § 616 (requiring contributions from VoIP service providers). For ease of reference, in this document, we use the terms “interstate” to mean “interstate and international” for matters pertaining to contributions and to cost recovery from the TRS Fund, and “voice service providers” to refer to all entities currently required to support the TRS Fund.

²⁹⁰ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 390-91, paras. 25-28. This approach was consistent with the Commission's treatment of other types of Internet-based TRS, namely VRS and IP Relay. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5153, para. 24 (2000) (2000 Improved TRS Order) (authorizing such “special funding” for VRS on an interim basis “to speed its development”); *Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Petition for Clarification of WorldCom, Inc.*, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 7779, 7786, para. 20 (2002) (2002 IP Relay Declaratory Ruling) (authorizing same to encourage the development of IP Relay service).

²⁹¹ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 390, para. 25.

1. Expanding the TRS Fund Base

102. As explained above, the IP CTS landscape has changed significantly since this service first received Commission approval for compensation. In light of these changes, and to conform the funding of IP CTS to the requirements of section 225, we propose to expand the contribution base for IP CTS to include a percentage of annual intrastate revenues from telecommunications carriers and VoIP service providers. This proposal is a modification of the funding proposal put forth by IDT Telecom in a 2015 Petition for Rulemaking, which requested the Commission to expand the TRS Fund's contribution base for all TRS to include intrastate revenues.²⁹² Because this Further Notice is focused on IP CTS, our proposal here addresses only the expansion of the TRS Fund contribution base to support IP CTS. A majority of parties, including the Consumer Groups and several TRS providers, support IDT's proposed expansion.²⁹³

103. We propose to expand the TRS Fund contribution base in this manner for several reasons. First, the goal of nationwide availability has been fully achieved, IP CTS is offered by five competing providers (as compared to only two providers under a single vendor in 2007)²⁹⁴ and the service is used extensively nationwide. In light of these changes, we no longer discern a compelling reason to support IP CTS solely from contributions by subscribers to interstate services. The burgeoning growth of this service offers evidence that the special arrangement of treating all IP CTS costs as interstate costs is no longer necessary as an "interim" measure to spur the development of this service.

104. Second, we note that intrastate end-user revenues for the services that support the TRS Fund currently comprise approximately 60% of total end-user revenues,²⁹⁵ and that intrastate minutes of use of CTS (the most analogous form of TRS) represent approximately 76% of total CTS minutes.²⁹⁶ Yet, at present, no revenues from intrastate services are used to help support IP CTS.²⁹⁷ Given these disparities between interstate and intrastate support of TRS, we believe that expanding the TRS Fund contribution base for support of IP CTS to include intrastate revenues would reduce the inequitable TRS

²⁹² IDT Petition at 1, 14; *see also Request for Comment on Petition for Rulemaking Filed by IDT Telecom, Inc., Regarding Interstate Telecommunications Relay Service Fund Contribution*, Public Notice, 30 FCC Rcd 14382 (CGB 2015).

²⁹³ *See, e.g.*, Consumer Groups Comments, CG Docket 03-123, at 2 (filed Feb. 4, 2016) (Consumer Groups IDT Petition Comments); Sorenson Comments, CG Docket No. 03-123, at 1 (filed Feb. 4, 2016) (Sorenson IDT Petition Comments); Letter from Claude L. Stout, Executive Director, Telecommunications for the Deaf and Hard of Hearing, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket No. 03-123, at 1 (filed Dec. 20, 2017) (Consumer Groups continue to support IDT's Petition for Rulemaking).

²⁹⁴ *See generally 2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 389, para. 24.

²⁹⁵ *See* Federal-State Joint Board on Universal Service, *Universal Service Monitoring Report – 2016*, CC Docket No. 96-45 et al., at 10, Table 1.2 (filed Jan. 13, 2017), <https://ecfsapi.fcc.gov/file/01130906803491/DOC-343025A1.pdf> (2016 USF Monitoring Report).

²⁹⁶ *See* Rolka Loube, 2017-2018 TRS Filing Presentation at 4-5 (2017), http://docs.wixstatic.com/ugd/455e4d_ea792561fd72442090ec35c37c591e01.pptx?dn=advisory%20council%20draft%20presentation.pptx (Rolka Loube 2017-18 TRS Filing Presentation) (showing intrastate CTS minutes used to calculate the MARS rate, and interstate CTS minutes for a comparable period).

²⁹⁷ In fact, IP CTS expenditures, funded entirely by interstate revenues, are larger than the combined total of state-funded expenditures on all forms of intrastate TRS. IP CTS expenditures were projected to be about \$400 million in 2016-17 and, at the current compensation rate, are projected to reach approximately \$748 million in 2017-18. *See* 2016 TRS Rate Filing, Exh. 1-4 (showing projected 2016-17 expenditures for IP CTS); 2017 TRS Rate Filing Supplement (Revised), Exh. 1-3.3 (showing projected program year expenditures for 2017-18 to be \$748 million). By comparison, the total intrastate payments for 2016 for CTS were approximately \$34.5 million. *See* 2017 TRS Rate Filing, Exh. 1-2 (CTS Data).

support burden borne by those voice service providers whose traffic is primarily interstate.²⁹⁸ By the same token, such expansion would ensure that a reasonable share of support for IP CTS is obtained from those voice service providers with mostly intrastate traffic. We seek comment on these beliefs, and on any other benefits or costs that would result from expanding the contribution base for IP CTS to include intrastate voice service revenues.

105. *Implementation.* As the initial step in implementing this proposal—which assumes that, at least for the near term, the total IP CTS revenue requirement (RR) continues to be paid out of the TRS Fund²⁹⁹—the TRS Fund administrator would aggregate the total end-user revenue data reported by TRS Fund contributors on Forms 499-A and 499-Q.³⁰⁰ With approximately 40% of total TRS Fund contributors’ end-user revenues classified as interstate and approximately 60% classified as intrastate, the TRS Fund revenue base available to support IP CTS would increase by approximately 150% (60% / 40%).³⁰¹ Next, the TRS Fund administrator would calculate an IP CTS revenue requirement sufficient to compensate IP CTS providers for their reasonable costs of providing IP CTS.³⁰² A separate contribution factor or factors would then be developed for the purpose of determining the contributions needed from each TRS Fund contributor for support of IP CTS. This might be done in a number of ways.

106. Under one possible approach, the TRS Fund administrator could compute a single contribution factor for IP CTS, which would be applied in the same manner to all end-user revenues, both interstate and intrastate, in effect treating the IP CTS revenue requirement as a single pool to which all TRS Fund contributors would pay the same percentage of their total end-user revenues. For example, if we assume for purposes of illustration that the IP CTS revenue requirement totals \$700 million and that TRS contributors’ interstate and intrastate end-user revenues total \$160 billion, the “unseparated” IP CTS contribution factor would be 0.4375% (\$700 million / \$160 billion). We seek comment on whether this approach is reasonable, equitable to all providers, and consistent with the requirements of section 225.

107. Under an alternative plan, the IP CTS revenue requirement would be divided into interstate and intrastate portions, based on an estimate of the proportion of IP CTS costs and minutes that are interstate and intrastate, respectively. Separate contribution factors would then be determined for (1) interstate IP CTS, by dividing the interstate IP CTS revenue requirement by total interstate end-user revenues of all TRS contributors, and (2) intrastate IP CTS, by dividing the intrastate IP CTS revenue requirement by total intrastate end-user revenues of all TRS contributors (minus intrastate revenues attributable to states that do not self-administer IP CTS).³⁰³ Under this alternative approach, the contribution factors for interstate and intrastate IP CTS, respectively, would not be the same because the IP CTS revenue requirement would be allocated between the separate jurisdictions based on the percentage of *IP CTS minutes and provider costs* attributed to each jurisdiction, while the contribution

²⁹⁸ See IDT Petition at 6-7 (estimating at the time the petition was filed—that, of \$1,124,797,718 contributed to the TRS Fund by interstate and international service providers and budgeted for payments to TRS service providers in Fund year 2015-16, approximately \$868,650,504 would be paid for costs associated with intrastate IP-based services).

²⁹⁹ To the extent that states begin to self-administer IP CTS, however, the intrastate end user revenues reported by telecommunications carriers and VoIP service providers would need to be attributed on a state-by-state basis in order to ensure that a contribution is not collected from intrastate end user revenues that are attributable to states that have chosen to include IP CTS in their TRS programs. See *infra* para. 114.

³⁰⁰ Currently, FCC Forms 499-A and 499-Q are used to report each TRS Fund contributor’s total end user revenues as well as its interstate end user revenues. In 2015, approximately 40% of total end user revenues reported on Form 499-A were interstate. See 2016 USF Monitoring Report at 10, Table 1.2.

³⁰¹ See *id.*

³⁰² The compensation methodology used to determine the IP CTS compensation rate and the total IP CTS revenue requirement would be unaffected by this proposal, however.

³⁰³ Intrastate end-user revenues of all TRS contributors can be derived by subtracting all TRS contributors’ total interstate end user revenues from their total end user revenues. See 2016 USF Monitoring Report at 10, Table 1.2.

base would be allocated based on the percentage of *end-user revenues* allocated to each jurisdiction. For example, under the above illustrative assumptions regarding the total IP CTS revenue requirement and voice service providers' total end-user revenues, and based on the further assumption that the interstate/intrastate split of IP CTS costs and minutes is 25% / 75%, while the interstate/intrastate split of voice service providers' end-user revenues is 40% / 60%, then the interstate IP CTS contribution factor would be approximately 0.27% ([25% of \$700 million] / [40% of \$160 billion]), and the intrastate IP CTS contribution factor would be approximately 0.55% ([75% of \$700 million] / [60% of \$160 billion]).

108. Implementation of this second alternative approach would be more complicated, and might involve some additional delay, because it would require the TRS Fund administrator (or the Commission) to estimate the proportions of IP CTS minutes and provider costs that are interstate and intrastate. We seek comment on whether such a calculation is necessary to ensure that the burden of TRS Fund contributions is distributed equitably among voice service providers and consistently with section 225.³⁰⁴ If so, how should such separation of IP CTS costs and minutes be determined? Are the current separations rules adequate to separate intrastate and interstate IP CTS costs, or would it be necessary to refer this issue to the Federal-State Joint Board on Separations?³⁰⁵ We note that in 2003, the Commission expected that TRS providers would be able to make jurisdictional determinations regarding the separation of CTS minutes handled through state programs.³⁰⁶ Further, in submissions to the TRS Fund administrator accompanying requests for compensation, some IP CTS providers currently report both the originating and terminating telephone numbers for almost all their calls,³⁰⁷ suggesting that such jurisdictional allocation of IP CTS minutes is feasible. To the extent that some IP CTS calls cannot

³⁰⁴ See 47 U.S.C. § 225(d)(3). We note that IP CTS providers' compensation would not be affected by which of the two alternatives discussed above is selected, unless we were to set different compensation rates for interstate and intrastate IP CTS minutes. We see no need to do so. See *2007 TRS Compensation Methodology Order*, 22 FCC Rcd at 20149-58, paras. 16-37 (equalizing interstate and intrastate compensation rates for TTY-based TRS, STS, and CTS).

³⁰⁵ See Nebraska Comments, CG Docket Nos. 13-24 and 03-123, at 2 (filed Nov. 1, 2013) (Nebraska 2013 FNPRM Comments); NARUC Comments, CG Docket Nos. 13-24 and 03-123, at 6 (filed Nov. 4, 2013) (NARUC 2013 FNPRM Comments) (both stating that such a referral is mandatory); Missouri Reply Comments, CG Docket Nos. 13-24 and 03-123, at 3 (filed Nov. 18, 2013) (Missouri 2013 FNPRM Reply Comments) (stating that states should have an opportunity to provide additional input if an allocation method is used to determine the jurisdiction of IP CTS calls). According to section 225, the Commission's prescription of rules governing jurisdictional separation of TRS costs must be consistent with section 410 of the Act. 47 U.S.C. § 225(d)(3)(A). Section 410, in addition to authorizing the use of Joint Boards as the Commission deems appropriate, states that the Commission "shall refer any [NPRM-initiated] proceeding regarding the jurisdictional separation of common carrier property and expenses between interstate and intrastate operations" to a Joint Board. 47 U.S.C. § 410(c). However, in the initial 1993 decision establishing the TRS Fund, the Commission determined that the existing separations rules were adequate to separate TRS provider costs and that, accordingly, it would not be necessary to convene such a board. *1993 TRS Order*, 8 FCC Rcd at 5305, para. 30 & n.30. We also believe it is significant that the scheme established by section 225 for joint federal and state administration of TRS is separate—and significantly different from—the Communications Act's traditional division of jurisdictional responsibilities over wireline telecommunications service. Compare 47 U.S.C. § 225(f) (providing for Commission review and certification of programs established by states "for implementing intrastate telecommunications relay services" subject to regulations prescribed by the Commission) with 47 U.S.C. § 152(b) (providing that "except as provided in sections 223 through 227 of this title . . . nothing in this chapter shall be construed to apply or to give the Commission jurisdiction with respect to [] charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier").

³⁰⁶ See *2003 CTS Declaratory Ruling*, 18 FCC Rcd at 16128-29, paras. 19-22 (declining to permit all captioned telephone calls to be compensated from the Fund, noting that for such calls providers can determine if a particular call is interstate or intrastate).

³⁰⁷ Our rules generally require TRS providers to submit the originating and terminating telephone numbers for TRS calls for which compensation is requested from the TRS Fund. 47 CFR § 64.604(c)(5)(iii)(D)(2)(v)-(vi). However, some providers report only the registered user's number for most of their IP CTS calls.

currently be identified as either intra- or interstate, should the Commission permit a percentage classification based on traffic studies? Alternatively, should the Commission establish a default proxy allocation, and if so, what should the proxy allocation be?³⁰⁸ We also seek comment on any other implementation alternatives that the Commission should consider.

2. Statutory Authority to Require Intrastate Support of IP CTS

109. *Statutory authority.* For several reasons, we believe that the Commission has ample authority to collect contributions from telecommunications carriers' and VoIP service providers' intrastate end-user revenues to support the provision of intrastate IP CTS calls, including in situations where the state does not assume funding responsibility. First, section 225(d)(3) of the Act requires the Commission to prescribe regulations that "generally" provide that TRS costs caused by interstate and intrastate jurisdictions are each recoverable from the subscribers of their respective jurisdictions.³⁰⁹ The Commission consistently has ruled that by use of the term "generally," Congress intended for the Commission to have broad authority to determine how TRS costs will be recovered.³¹⁰ It was this authority on which the Commission relied to permit recovery of the costs of intrastate IP CTS, as well as intrastate VRS and intrastate IP Relay calls, from the TRS Fund.³¹¹ Further, section 225(b)(2) states that "the Commission [has] the same authority, power, and functions with respect to common carriers engaged in intrastate communication as the Commission has in administering and enforcing the provisions of this subchapter with respect to any common carrier engaged in interstate communication."³¹² Finally, under section 225, where a state does not establish a Commission-certified TRS program, the provision of intrastate TRS must be directly supervised by the Commission.³¹³ We ask commenters whether they

³⁰⁸ For example, an estimate of the split between intrastate and interstate calls could be based on the split between intrastate and interstate calls for CTS, which is currently approximately 24% interstate and 76% intrastate. Rolka Loube 2017-18 TRS Filing Presentation, at 4-5 (showing intrastate CTS minutes used to calculate the MARS rate, and interstate CTS minutes for a comparable period).

³⁰⁹ 47 U.S.C. § 225(d)(3)(B).

³¹⁰ See *Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Petition for Clarification of WorldCom, Inc.*, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 7779, 7786, para. 21 (2002); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5154, para. 26 (2000).

³¹¹ *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 390, para. 25 & n.78.

³¹² 47 U.S.C. § 225(b)(2). In comments on the IDT Petition, the Voice on the Net Coalition (VON Coalition)—the only party to oppose the Petition—argues that this provision merely "grants the Commission some enforcement authority over intrastate common carriers that fail to comply with the Act and FCC regulations promulgated thereunder," and "does nothing to negate the statutory limits Congress imposed on the Commission's authority to collect intrastate revenue for contribution to the federal Fund." VON Coalition Comments, CG Docket No. 03-123, at 2-3 (filed Feb. 4, 2016) (VON Coalition IDT Petition Comments). This argument, however, disregards that section 225(b)(2) expressly grants the Commission authority over intrastate common carriers for purposes of "administering" as well as "enforcing" the provisions of section 225. 47 U.S.C. § 225(b)(2). It also disregards that section 225(b)(1) requires the Commission to ensure the availability of both interstate and intrastate TRS. *Id.* § 225(b)(1). Additionally, while section 225(d)(3) provides clarity on intra- versus interstate funding for TRS, 47 U.S.C. § 225(d)(3), as we state above, the Commission consistently has ruled that by use of the term "generally," Congress intended for the Commission to have broad authority to determine how TRS costs will be recovered. It was this authority on which the Commission relied to permit recovery of the costs of intrastate IP CTS, as well as intrastate VRS and intrastate IP Relay calls, from the TRS Fund. *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 390, para. 25; see Sorenson IDT Petition Comments at 2 (agreeing that the Commission could expand the contribution base).

³¹³ 47 U.S.C. § 225(c). This holds true for states that either opt out, are found ineligible, or have had their previous certification suspended or revoked. See, e.g., *Request to Decertify the State of Arkansas Telecommunications Relay Services Program*, Memorandum Opinion and Order, 10 FCC Rcd 6157, 6160, para. 19 (CGB 1995). The Commission's jurisdiction under section 225 to supervise intrastate TRS contrasts significantly with the statutory

agree that these legislative sources provide ample statutory authority for the Commission to address the support for intrastate IP CTS calls.

110. We also believe section 225 authorizes the classification of some IP CTS calls as jurisdictionally intrastate. Unlike other forms of Internet-based TRS, where one “leg” of the end-to-end communication between the parties to the call necessarily takes place via IP facilities, the end-to-end voice communication between the calling party and the called party on an IP CTS call uses the same ten-digit telephone numbers as ordinary voice traffic and is routed via traditional PSTN telephone lines or interconnected VoIP, like any other voice call.³¹⁴ Further, the Commission has previously found that the definition of TRS includes transmission using any technology, including Internet Protocol, and is “constrained only by the requirement that such service provide a specific functionality.”³¹⁵ Accordingly, as with a number of other forms of TRS, we believe that when both parties to an IP CTS call are located within the same state, the call should be classified as an intrastate call under section 225. We seek comment on these views.

C. State Role in the Administration of IP CTS

111. We seek further comment on whether certified state TRS programs should be allowed or required to take a more active role in the administration of IP CTS. Under section 225(c) of the Act, common carriers may fulfill their obligation to offer TRS throughout the areas in which they offer telephone service “individually, through designees, through a competitively selected vendor, or in concert with other carriers,” or by complying with the requirements of state TRS programs certified by the Commission.³¹⁶ Currently, all 50 states plus six U.S. territories have TRS programs certified by the Commission that offer the two forms of TRS currently required for state program certification: TTY-voice and speech-to-speech TRS.³¹⁷ Additionally, all TRS state programs offer, oversee, and support a

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provisions governing the Universal Service Fund (USF) programs. Unlike section 254, which governs USF, section 225 is expressly exempted from the reservation of state authority in section 2(b) of the Act. *See* 47 U.S.C. § 152(b) (excluding section 225, among other provisions, from the scope of section 2(b)). Moreover, unlike section 254, section 225 does not expressly provide for separate oversight of interstate and intrastate programs by the Commission and the states. *See Id.* § 254(d) (providing for contributions to the Commission’s USF programs by providers of interstate telecommunications), (f) (providing for contributions to state-administered USF programs by providers of intrastate telecommunications), (k) (providing for the establishment of any necessary cost allocation rules, by the Commission for interstate services and by the states for intrastate services).

³¹⁴ *See 2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 385, para. 14. This distinguishes IP CTS from other forms of IP-based TRS, wherein the Commission previously noted difficulties in determining the jurisdictional status of TRS minutes because Internet addresses do not have geographic correlates. *2002 IP Relay Declaratory Ruling*, 17 FCC Rcd at 7784-86, paras. 15-21.

³¹⁵ *2002 IP Relay Declaratory Ruling*, 17 FCC Rcd at 7783, para. 10 (noting also that “Congress did not narrow its definition of TRS only to a specific category of services otherwise defined in the Act, such as ‘telecommunications services’ (in contradistinction to ‘information services’),” but rather “used the broad phrase ‘telephone transmission services’”); *see also 2003 CTS Declaratory Ruling*, 18 FCC Rcd at 16124, para. 8. The “specific functionality” referred to is “the ability for an individual who is deaf, hard of hearing, deaf-blind, or who has a speech disability to engage in communication by wire or radio with one or more individuals, in a manner that is functionally equivalent to the ability of a hearing individual.” 47 U.S.C. § 225(a)(3).

³¹⁶ 47 U.S.C. § 225(c). State programs may be certified to provide TRS so long as they (1) meet or exceed the Commission’s mandatory minimum standards for the provision of intrastate and interstate TRS calls and (2) make available adequate procedures and remedies for enforcement of such state requirements. *Id.* § 225(f)(2).

³¹⁷ Thus, by asking whether a state administrative role for IP CTS should be “required,” we seek comment on whether the state’s assumption of an administrative role for IP CTS should be a condition for the Commission’s certification of a state program. *See id.* § 225(c).

non-IP version of CTS on a voluntary basis.³¹⁸

112. Given their responsibility for administering other forms of TRS (including CTS) and their greater proximity to residents using IP CTS within their jurisdiction, we believe that state TRS programs have the expertise, demonstrated skills, and on-the-ground experience to assume administrative functions with respect to IP CTS.³¹⁹ However, at least some commenters responding to the *2013 IP CTS Reform NPRM* question whether it would be desirable for states to take on IP CTS funding and administration before issues related to user eligibility, uncontrolled growth of IP CTS demand, and standards of service have been addressed at the federal level.³²⁰ Additionally, for some states, it appears that state legislative authority may be needed to allow such a transition.³²¹ We seek to update the record on the extent to which states continue to have these various concerns, or whether they would have an interest in voluntarily assuming an administrative role for IP CTS operations. We also seek comment on how much discretion states that are willing to take on such a role should have in designing their IP CTS programs. However, we note that, in general, a state IP CTS program would remain subject to certification by the Commission, and, as for all forms of TRS, therefore be expected to comply with any mandatory minimum TRS standards established by the Commission.

113. To the extent that state TRS programs remain reluctant to assume all obligations associated with operating a TRS program, a more modest approach would be to allow or require state entities to take on particular roles in the administration of IP CTS. We have identified two components that may be appropriate for this purpose—intrastate funding and provider certification. Below, we discuss and seek comment on both of these issues. We also seek comment below on steps to ensure independent IP CTS user eligibility assessments, including whether such assessments should be conducted by state programs.

1. Intrastate Funding

114. If we adopt our proposal for IP CTS to be supported in part by intrastate end-user revenues, as proposed above, we seek comment on whether state TRS programs should be required or

³¹⁸ Although CTS is not currently required for state program certification, this form of CTS, like all other forms of TRS, is subject to the FCC's minimum TRS standards when provided through state programs. *See 2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 390-93, paras. 27-31.

³¹⁹ *See, e.g.*, NASRA 2013 FNPRM Comments at 1 (noting that state equipment distribution programs already screen individuals for CTS and IP CTS equipment). For example, Telecommunications Access of Maryland (TAM) oversees CTS, including determining eligibility for the service. Maryland Relay, *Telecommunications Access of Maryland (TAM)*, <http://doit.maryland.gov/mdrelay/Pages/TAM.aspx> (last visited May 11, 2018); Maryland Relay, *Captioned Telephone*, <http://doit.maryland.gov/mdrelay/Pages/CAPTEL.aspx> (last visited May 11, 2018) (explaining CTS); Maryland Relay, *MAT Program Application Process*, <http://doit.maryland.gov/mdrelay/Pages/Application-Process.aspx> (last visited May 11, 2018).

³²⁰ *See* California Comments, CG Docket Nos. 13-24 and 03-123, at 8 (filed Nov. 4, 2013) (California 2013 FNPRM Comments) (arguing that a potential transfer of administrative functions to states could be better accomplished after the removal of unauthorized users, and a baseline for users and their call patterns have been established); DC Comments, CG Docket Nos. 13-24 and 03-123, at 4 (filed Nov. 1, 2013) (DC 2013 FNPRM Comments) (expressing concern over administering a program where the costs for IP CTS have increased substantially and establish an eligibility program); Florida 2013 FNPRM Comments at 3-4 (urging the Commission to assure that the problem of IP CTS growth from misuse is corrected before mandating state funding); Missouri 2013 FNPRM Reply Comments at 4 (urging resolution of the unauthorized use problem before transfer); South Carolina Reply Comments, CG Docket No. 13-24 and 03-123, at 2 (South Carolina 2013 FNPRM Reply Comments); *see also* NARUC 2013 FNPRM Comments at 7-8 (urging the Commission to curb the improper growth before shifting costs to the states); NASRA 2013 FNPRM Comments at 1 (urging the adoption of mandatory minimum standards specific to IP CTS, including speed and accuracy standards).

³²¹ *See* California 2013 FNPRM Comments at 3-4; Florida 2013 FNPRM Comments at 3, 5-7; Nebraska 2013 FNPRM Comments at 3; Kentucky 2013 FNPRM Comments at 3-5; *see also* NARUC 2013 FNPRM Comments at 8; NASRA 2013 FNPRM at 1.

permitted to administer intrastate funding for the costs of IP CTS to their residents (i.e., to “opt out” of having revenues from their intrastate carriers contributed to the TRS Fund, so that they can handle such funding on their own). In addition to the jurisdictional separations issues discussed above, if any state chooses to assume responsibility for funding intrastate IP CTS, the TRS Fund’s IP CTS revenue requirement would need to be adjusted to reflect that intrastate IP CTS need no longer be supported for that state, by excluding from the intrastate end-user revenues subject to TRS Fund contribution all intrastate revenues attributable to voice service provided in that state. We seek comment on how this adjustment should be calculated. For example, should we require each TRS Fund contributor to calculate and report their own state-by-state allocation of end-user revenues? Alternatively, should the TRS Fund administrator attribute a portion of some or all contributors’ end-user revenues to states based on the most recent state-by-state USF contribution percentages for various categories of telecommunications service, as calculated by the Federal-State Joint Board on Universal Service?³²²

2. Provider Certification

115. Next, we seek comment on whether state TRS programs should be required or permitted to certify IP CTS providers that are allowed to deliver IP CTS services to the residents of their states. Presently, such provider certifications are handled exclusively by the Commission.³²³ If states handle such certifications, to what extent should states be required to offer consumers a choice of providers, given that most state TRS programs presently have a single TRS vendor?³²⁴ Further, we seek comment on the criteria that states should use for approving certification, and whether this should be consistent across all state programs.

116. If either the funding or certification functions—or the broader function of administering IP CTS—is transferred to state TRS programs, we seek comment on the amount of time state TRS programs will need to secure the necessary resources and regulatory changes at the local level for their implementation.³²⁵ We also seek comment on whether and how to define a time “window” within which each state that intends to participate in these functions must notify the Commission of such intention.

D. Ensuring Independent Assessments

117. Information in the record suggests that only a portion of the millions of Americans who have some level of hearing loss require IP CTS to achieve functionally equivalent telephone communication.³²⁶ Because of IP CTS’s ease of use and the absence of any direct interaction between the calling parties and the CA, compared with other forms of TRS, it appears more likely that individuals who do not have a disability or who do not require this form of TRS may use it as a convenience, rather

³²² See, e.g., 2016 USF Monitoring Report at 17, Table 1.8 (showing the estimated percentages of intrastate end-user revenues reported by contributors for 2014 that are attributable to each state).

³²³ 47 CFR § 64.606(a)(2).

³²⁴ Although the Commission has encouraged states to establish multi-vendor programs that offer consumers a competitive choice, *2000 Improved TRS Order*, 15 FCC Rcd at 5157-58, paras. 36-37, comments in response to the *2013 IP CTS Reform FNPRM* indicate that California may be the only state with a multi-vendor TRS program. See ACDHH 2013 FNPRM Reply Comments at 4; California 2013 FNPRM Comments at 7.

³²⁵ Parties commenting on the *2013 IP CTS Reform FNPRM* provide a range of timeframes that would be needed for this transition. See, e.g., California 2013 FNPRM Comments at 2, 6-7 (stating that there are five steps involved in such a transition, each of which could take 12-18 months); Missouri 2013 FNPRM Reply Comments at 5; Nebraska 2013 FNPRM Comments at 4 (each stating that states need at least 5 years); DC 2013 FNPRM Comments at 4-5; Purple 2013 FNPRM Comments at 4-5; Sorenson 2013 FNPRM Comments at 29; ACDHH 2013 FNPRM Reply Comments at 5-6; Florida 2013 FNPRM Comments at 3, 5-7; Kentucky 2013 FNPRM Comments at 3-5; NASRA 2013 FNPRM Comments at 1-2; South Carolina 2013 FNPRM Reply Comments at 2.

³²⁶ See, e.g., TEDPA Mar. 2015 *Ex Parte* at 1-2; TEDPA Oct. 2017 *Ex Parte*.

than a necessary means to achieve functionally equivalent communications.³²⁷ We are concerned that this trend, and the exponential growth in IP CTS has been exacerbated by the failure of user assessments to be sufficiently complete and objective.³²⁸

118. First, the record indicates that, as currently conducted, user assessments are unlikely to accurately determine whether an individual's hearing loss warrants their use of IP CTS. Specifically, the extent to which an individual's hearing loss affects that person's ability to understand telephonic speech—and, therefore, necessitates the use of IP CTS to communicate by phone—can depend on a number of factors, including the individual's specific decibel levels of hearing loss as affected by different sound frequencies, environmental and background noises, and device distortion.³²⁹ This suggests that an effective assessment of an individual's need for IP CTS should be based on a more specific evaluation than a generalized hearing test or a previously recorded audiogram, and should consider whether an individual's communications needs can be met by other assistive technologies.³³⁰ According to TEDPA, which represents state programs offering assistive communications devices to consumers with disabilities, some professionals currently certify individuals as eligible for IP CTS “with little to no assessment and/or discussion with the [consumer] of whether other technology such as amplified telephones . . . would provide the most functionally equivalent access to telephone service.”³³¹ TEDPA also reports that most people who request CTS phones at their centers (as compared to doing so through the provider certification process) “end up getting alternative technologies such as amplified telephones when assisted by EDP staff.”³³²

119. In order to prevent the waste of TRS Fund resources, we therefore propose that assessments of IP CTS user need must be specifically focused on the consumer's ability to hear and understand speech over the telephone and on whether the consumer's communications needs can be met by other assistive technologies.³³³ We seek comment on this proposal and invite parties to submit

³²⁷ See *supra* para. 9.

³²⁸ Although the previously adopted rule on third-party professional certifications was vacated by the D.C. Circuit in 2014, see *Sorenson*, 755 F.3d at 705-10, some IP CTS providers report that they have continued voluntarily to require such certifications for new registrants. See, e.g., Fourth Amendment to Application of Hamilton for Certification as a Provider of IP CTS, CG Docket Nos. 10-51 and 03-123, at 4 (filed Dec. 2, 2014) (Hamilton Amended Certification Application); *Sorenson* Jan. 12, 2018 *Ex Parte* at 1 (stating that “CaptionCall has kept in place its requirement that each new prospective customer provide a professional certification”); see also *2013 IP CTS Interim Order*, 28 FCC Rcd at 716-20, paras. 19-26 (prior rule addressing third-party certifications).

³²⁹ *2013 IP CTS Reform Order*, 28 FCC Rcd at 13456-58, paras. 78-81 (citing comments from the Rehabilitation Engineering Research Center on Telecommunications Access, various consumer groups, and providers). According to one TEDPA member, a person with hearing loss who is familiar with the tone and speech patterns of certain family members or friends may not need captioning, but rather may be able to use amplification for phone communication with these individuals. Letter from James Forstall, Chair, TEDPA, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 13-24, Attach. at 6 (filed Nov. 20, 2017) (TEDPA Nov. 2017 *Ex Parte*).

³³⁰ See TEDPA Mar. 2015 *Ex Parte* at 1 (noting that “[i]n many situations individuals initially seeking captioned telephones from state EDPs ultimately decide after assessment that a good quality amplified telephone (with or without tone control) more appropriately meets their needs.”); TEDPA Nov. 2017 *Ex Parte*, Attach. at 7 (containing the representation from one EDP that their consultations with consumers result in these persons declining an IP CTS device “most of the time,” and that the mere fact that a person has hearing loss does not mean that a captioned phone is for right for that person).

³³¹ TEDPA Mar. 2015 *Ex Parte* at 1.

³³² TEDPA Oct. 2017 *Ex Parte* at 1 (noting that in the Florida program, as many as 8 out of 10 EDP participants choose alternatives to CTS devices when assessments are conducted).

³³³ See Letter from Robert Felgar, CEO, RAZ Mobility, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 1 (filed Dec. 7, 2017) (describing a new assistive technology under development by RAZ Mobility and TuneFork that uses the results of a hearing test taken on a smartphone to “personalize the smartphone audio to significantly improve the user's listening experience” and advocating that state agencies conducting

documentation or other evidence confirming whether the assessments currently conducted by health professionals for potential IP CTS users actually include these specific elements.³³⁴

120. Second, there is evidence that current assessments of users' need for IP CTS are unlikely to be objective. Evidence indicates that third-party professional assessments of need have become an integral part of some providers' marketing plans, such that some third-party professionals—through pre-established and sometimes exclusive arrangements with certain IP CTS providers—have been helping to promote these providers' IP CTS offerings at the same time as they purportedly provide an objective certification of their clients' need for IP CTS. These arrangements sometimes include joint arrangements to advertise the provider's offer of a free phone and relay service in the professional's offices, on its websites,³³⁵ and in combined sessions during which consumers can receive both a free IP CTS phone and no-cost hearing analysis.³³⁶ Evidence also suggests that sometimes the professional engages in such measures and provides referrals for one provider to the exclusion of its competitors.³³⁷

121. In light of the benefits derived from such arrangements (i.e., opportunities to sell professional services and hearing aids to new or existing customers), we are concerned that professionals have an incentive to acquiesce to their customers' requests for IP CTS eligibility certification, rather than thoroughly and objectively evaluate their need for IP CTS—even when alternatives to IP CTS often may provide a more cost-efficient and effective means of enabling telephone communication for these individuals.³³⁸ Along these lines, some hearing health professionals have announced their desire to

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 assessments of users' eligibility for IP CTS “should be required to educate consumers regarding alternatives to IP CTS, such as TuneFork's solution”).

³³⁴ In a recent *ex parte* filing, Sorenson states that its CaptionCall subsidiary “has adopted an independent third-party certification process to prevent” the practices that are described by TEDPA wherein professional certifications are made with little to no assessment of whether other technology such as amplified telephones would be preferable. Sorenson Jan. 12, 2018 *Ex Parte* at 1. Sorenson states that “CaptionCall's Professional Certification Form specifically requires a hearing-care or healthcare professional to attest, *under penalty of perjury*, that she has diagnosed the patient for a ‘hearing loss that makes it difficult to communicate by telephone and [that the patient] requires the use of captioned telephone service to communicate by telephone in a manner that is functionally equivalent to a fully hearing person.’” Sorenson Jan. 12, 2018 *Ex Parte* at 2 (emphasis in original). According to Sorenson, “[a] hearing health care professional that has not examined the patient, personally or by a member of her staff, cannot make this attestation, and the judgment attested to is that the patient ‘requires’ the use of captions to have functionally equivalent service. . . . CaptionCall has not observed nor seen any evidence that any hearing-health professional is risking her professional career by signing false certifications.” Sorenson Jan. 12, 2018 *Ex Parte* at 2. We note that, while Sorenson infers that its required professional certification presupposes that the professional has personally examined the individual in order to assess that person's ability to communicate by telephone and that the professional has evaluated whether alternative assistive technologies would meet the individual's communications needs, its certification does not appear to include specific affirmations on these points.

³³⁵ See, e.g., Audiology Center, *CaptionCall, Reclaim Your Phone and Your Life*, <https://audiologycentral.com/caption-call> (last visited May 11, 2018); Hearing Connection, *CaptionCall, Life Is Calling*, <http://www.stjohearing.com/caption-call.html> (last visited May 11, 2018).

³³⁶ Area Seniors, *Miracle-Ear & CaptionCall*, <http://www.areaseniorsinc.org/miracle-ear-captioncall/> (last visited May 11, 2018) (noting that Miracle-Ear Center is pleased to announce that they have teamed up with CaptionCall).

³³⁷ Information from TEDPA also suggests that some audiologists and hearing aid vendors have refused to accept information about amplified phones or other communication alternatives from state EDPs, seemingly due to arrangements with IP CTS providers. See TEDPA Nov. 2017 *Ex Parte*, Attach. at 5.

³³⁸ *CaptionCall, The Gold Standard*, in TEDPA Nov. 2017 *Ex Parte*, Attach. at 29-33 (encouraging hearing health professionals to “make CaptionCall part of your daily patient offering” in order to “[b]uild patient loyalty” and provide “a unique offer to drive new and repeat traffic”).

streamline the assessment process to make it easier for their patients to obtain IP CTS devices.³³⁹

122. To ensure that eligibility screening of IP CTS users is both neutral and complete, we propose to amend our rules to require that each prospective IP CTS user undergo an objective assessment by a qualified and independent entity³⁴⁰ that will determine whether the individual has a “hearing loss that necessitates use of captioned telephone service.”³⁴¹ To ensure that screenings specifically assess the need for IP CTS, we further propose that each assessment include a functional assessment of each applicant’s communication needs, including the extent to which the individual would be able to achieve functionally equivalent telephone service by using an amplified telephone or other assistive technology. We seek comment on these proposals and our rationale. In addition, we seek comment on two alternative approaches, set forth below, to achieve our objectives.

123. *Assessments by State Programs.* Having state TRS programs handle IP CTS user eligibility assessments could be an effective means of ensuring that such evaluations are sufficiently thorough and not biased toward the use of IP CTS. These programs, which often work in conjunction with state EDPs and other state agency programs that have expertise and experience in assessing the types of communication technologies needed by individuals with hearing loss, seem well-suited for determining eligibility for IP CTS.³⁴² According to TEDPA, rather than measure decibel loss or speech discrimination, state programs tend to conduct tests that are “more functional and involve having the applicant try different pieces of equipment to determine which will work the best.”³⁴³ Additionally, we believe state EDPs, which offer multiple service locations throughout the country, are relatively convenient for visits by potential IP CTS users. Moreover, as governmental or non-profit entities, they are unlikely to have a commercial or other incentive to prefer one technology over another.³⁴⁴ For these reasons, and given our estimate that intrastate minutes comprise approximately 76% of total IP CTS minutes,³⁴⁵ we seek comment on whether state TRS programs should be required (as a condition of FCC certification under section 225(f)) to fulfill this user eligibility obligation—whether on their own, through

³³⁹ See, e.g., *id.*, Attach. at 29 (containing a statement by Darcy Bension, Au.D., Owner of California Hearing Center, that CaptionCall “make[s] it easy for us to provide CaptionCall to our patients by streamlining the process”).

³⁴⁰ See *infra* paras. 129-130 (proposing criteria to ensure that private entities conducting user assessments are qualified and independent from TRS providers).

³⁴¹ See TEDPA Mar. 2015 *Ex Parte* at 2 (recommending that third-party professional certifications state that “the consumer has a hearing loss that necessitates use of captioned telephone service”). We make this requirement prospective only because most existing IP CTS users have provided a professional certification of their hearing loss to their IP CTS providers. See, e.g., Hamilton Amended Certification Application at 4; Sorenson Jan. 12, 2018 *Ex Parte* at 1 (stating that “CaptionCall has kept in place its requirement that each new prospective customer provide a professional certification”). While we seek to improve the reliability of professional certifications, we do not think that the benefits of requiring a new eligibility assessment outweigh the burden of imposing this obligation on existing users, especially given the advanced age of most of these individuals.

³⁴² See *supra* note 319. There is precedent for the Commission’s reliance on state programs to conduct assessments of need for participation in a Commission program. Under the National Deaf-Blind Equipment Distribution Program, state programs are certified by the Commission to conduct assessments of low income individuals who are deaf-blind for the purpose of determining which communications equipment will best suit their individual hearing needs. See 47 CFR § 64.6207 (allowing certified state NDBEDP programs to receive reimbursement for their assessments).

³⁴³ TEDPA Mar. 2015 *Ex Parte* at 1. We note that because there are so many factors affecting the type and intensity of each person’s hearing loss, previously the Commission also rejected a bright line eligibility threshold test for this purpose. 2013 *IP CTS Reform Order*, 28 FCC Rcd at 13458-59, para. 82.

³⁴⁴ Letter from James Forstall, Chair, TEDPA, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 13-24, Attach. at 4 (filed Sept. 19, 2017).

³⁴⁵ See Rolka Loube 2017-18 TRS Filing Presentation, at 4-5 (reporting this estimate for CTS, the relay service that is most analogous to IP CTS).

state EDPs, or through contracting entities.

124. If this approach is adopted, we also seek comment on how user screenings can be most effectively and efficiently conducted. Should all such assessments comport with certain standards and practices established by the Commission for nationwide application, or should states each be permitted to establish their own eligibility criteria and processes for IP CTS screenings? We also seek information, if available, on the number of users that each state program likely will be able to screen in a given period of time, such as on a monthly basis. Finally, we seek comment on the current capacity of state programs to take on this task, and what amount of time may be needed to obtain the necessary resources and begin conducting such assessments.

125. We next ask commenters to share information about the costs and benefits of having state programs assume this function, based on state CTS screenings that have taken place to date. Regarding costs, we estimate that the likely cost for state entities to conduct an appropriate evaluation of every new IP CTS user would total approximately \$9 million annually. According to some sources, estimates of the cost of a comprehensive hearing evaluation for the purpose of determining whether an individual needs a hearing aid range from \$54 to more than \$224.³⁴⁶ The type of evaluation needed to establish eligibility for IP CTS, however, need not include all the elements of a general hearing evaluation—for example, a physical examination of the ear—and therefore may not cost as much as the upper range of a general hearing evaluation. Recently, TEDPA conducted a survey of state equipment distribution programs seeking information on the cost incurred by such agencies in assessing and evaluating a new applicant’s qualifications for program services and equipment.³⁴⁷ Respondents’ estimates of the average cost of such assessments or evaluations ranged from \$50 at the low end to \$250 at the high end.³⁴⁸ Estimates varied significantly based on whether assessments were conducted at an office, for which the median cost estimate was approximately \$100, or at the applicant’s home, for which the median cost estimate was approximately \$200.³⁴⁹ Based on the assumption that the majority of assessments would be conducted at an agency’s offices, as a preliminary estimate, we estimate the average cost of such an evaluation to be approximately \$125 per new user. Assuming no change in the current rate at which new users are being added (i.e., approximately 6,000 new IP CTS users per month),³⁵⁰ if we multiply that rate by the estimated average cost, (i.e., \$125 per user), the cost of evaluating new users would be approximately \$750,000 per month,³⁵¹ or \$9 million per year. We seek comment on this estimate and the underlying assumptions.

126. As noted above, the professional certifications that some providers currently claim to require are purportedly based on a professional assessment of whether the user needs IP CTS for effective

³⁴⁶ See, e.g., Callier Center for Communication Disorders, *Frequently Asked Questions*, <https://www.utdallas.edu/calliercenter/evaluation-and-treatment/hearing/faq.php#q6> (last visited May 11, 2018) (estimating the cost of a comprehensive hearing evaluation at \$150 to \$225); Healthcare Bluebook, *Hearing Test (comprehensive)*, [https://www.healthcarebluebook.com/page_ProcedureDetails.aspx?cftId=186&g=Hearing+Test+\(comprehensive\)](https://www.healthcarebluebook.com/page_ProcedureDetails.aspx?cftId=186&g=Hearing+Test+(comprehensive)) (last visited May 11, 2018) (stating that the cost of a comprehensive hearing test ranges from \$54 to \$224+ and that a “Fair Price” for such a test is \$59).

³⁴⁷ See Letter from James Forstall, TEDPA Liaison for IP CTS, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 13-24 (filed Feb. 9, 2018) (TEDPA Feb. 2018 *Ex Parte*).

³⁴⁸ *Id.*

³⁴⁹ *Id.*

³⁵⁰ According to the TRS Fund administrator, in 2017 the call detail records (CDRs) submitted by IP CTS providers reported an average of approximately 6,000 new registered-user Electronic Serial Numbers (ESNs) per month. Email from Kelly Kearn, Rolka Loube, to Robert Aldrich, CGB, FCC (Jan. 24, 2018).

³⁵¹ \$125 x 6,000 = \$750,000.

telephone communication,³⁵² but there is evidence that such certifications are unlikely to be based on an objective and appropriately focused evaluation.³⁵³ Nevertheless, because such private evaluations, to the extent they are currently being conducted, would be replaced by state-supervised screening, we invite providers to submit estimates of how many of their new users currently undergo such evaluations, and we invite parties generally to submit estimates of the costs currently incurred by users, hearing health professionals, and others to complete such evaluations. We estimate that these currently incurred evaluation costs will be saved to the extent that state agencies take over the evaluation function, because such private evaluations will not be necessary.

127. Consistent with section 225's requirement for the costs of providing intrastate TRS "generally" to be recovered from each intrastate jurisdiction, we seek comment on whether states should be permitted to recover expenses associated with such screenings from their intrastate telephone subscribers, much along the same lines that they now recover other costs associated with the provision of intrastate TRS. We further seek comment on whether a share of the costs of providing these assessments, proportionate to the interstate minutes of use by each state's residents, should be reimbursed to the states by the TRS Fund.

128. Next, we seek comment on how to ensure independent screenings are conducted in nonparticipating states that do not have EDPs.³⁵⁴ For example, should the Commission enter into contracts with third parties, on a national, regional, or local basis, that have the necessary expertise to fill this gap?³⁵⁵ If so, what qualifications should such parties possess, in terms of administrative capabilities, professional staffing, and experience? We invite state equipment programs and hearing health professionals who have performed assessments of need for CTS or IP CTS to describe what assessment tools they have used to determine whether these services are necessary in addition to or in lieu of other assistive technologies. We further propose that assessments conducted by such independent contractors adhere to the same criteria and standards as will apply to state programs taking on this function. Additionally, to ensure the neutrality of any screening entity—be it a state program or independent contractor—we propose that any personnel conducting assessments not have any business, family, or social relationships with any IP CTS provider or personnel.³⁵⁶ Alternatively, should we allow assessments by third-party professionals, as outlined below, in states without equipment distribution programs? We seek comment on these proposals.

129. *Assessments by Third-Party Professionals.* An alternative to having state programs conduct IP CTS screenings is to require IP CTS providers to obtain from each potential IP CTS user a certification from an independent, third-party hearing health professional affirming the user's eligibility to use IP CTS.³⁵⁷ We continue to be concerned, however, about the difficulties associated with relying on

³⁵² See *supra* note 334.

³⁵³ See *supra* paras. 118, 120.

³⁵⁴ TEDPA Mar. 2015 *Ex Parte* at 1 (noting that Delaware, Michigan and New York do not have EDPs).

³⁵⁵ We note that the Commission currently contracts with independent third parties to perform a number of TRS-related and other functions that are supported by the TRS Fund. *E.g.*, *Interstate Telecommunications Relay Service (TRS) Fund Administration Transition – Bank Account Change Over*, Public Notice, 26 FCC Rcd 8436, 8436 (2011) (announcing Rolka Loube's contract to oversee collections and distribution from the TRS Fund). Additionally, because not all states operate their own NDBEDP programs, Perkins School for the Blind and the Helen Keller National Center each administer this program and conduct consumer assessments on behalf of several states. See *2017-2018 Allocations for the National Deaf-Blind Equipment Distribution Program*, Public Notice, 32 FCC Rcd 5069 (2017).

³⁵⁶ Similarly, the NDBEDP requires certified entities to eliminate or minimize potential conflicts of interest from any relationship, arrangement or agreement with manufacturers and providers of equipment that could impede the objectivity of a certified entity in the distribution of equipment. 47 CFR § 64.6207.

³⁵⁷ In the past, this approach has received considerable support. See *generally* Hamilton Comments, CG Docket Nos. 13-24 and 03-123, at 5-6 (filed Feb. 26, 2013) (Hamilton 2013 Initial NPRM Comments); Purple Reply

this gatekeeping function, especially when it is conducted by professionals who may be subject to the enticements of free phones for their clients and other marketing promotions that can interfere with their impartial judgment about a client's eligibility. For this reason, if we adopt this approach, we believe that strict safeguards should be put into place to improve the objectivity and accuracy of these professional assessments, so that only individuals who actually need IP CTS will be permitted to register for this service. For this purpose, we seek comment on the following measures, and further ask commenters to share any other requirements they believe to be necessary to ensure the independence, expertise, and objectivity of certifying entities.

130. First, to ensure that a certifying third-party professional is qualified to assess a consumer's need for IP CTS, we propose to require that providers only be permitted to accept user assessment certifications signed by physicians specializing in otolaryngology, audiologists, or other state certified or licensed hearing health professionals qualified to evaluate an individual's hearing loss in accordance with applicable professional standards.³⁵⁸ Under this proposal, a person whose profession does not ordinarily encompass evaluating hearing loss would not be permitted to provide a third-party certification.³⁵⁹ We seek comment on this proposal and any other qualifications needed for such professionals. To ensure compliance with this requirement, and to prevent the possible emergence of "third-party certification mills," we also seek comment on whether to require IP CTS providers to report annually to the Commission the names and qualifications of professionals that certify multiple users annually, and the number of individuals each professional certifies for IP CTS in each Fund year.

131. Second, to provide assurance that a third-party professional's certification of a consumer's need for IP CTS is not directly or indirectly influenced by IP CTS providers through compensation, opportunities for meeting potential clients, or other provider enticements, we propose to prohibit an IP CTS provider from accepting a certification from any professional that has a business, family, or social relationship with the IP CTS provider or with any officer, director, partner, employee, agent, subcontractor, sponsoring organization, or affiliated entity (collectively, "affiliate") of the IP CTS provider.³⁶⁰ We propose that this prohibition specifically include situations where the professional, the professional's organization, or a colleague within that organization has been referred to the consumer, either directly or indirectly, by the IP CTS provider or any affiliate. We also propose to prohibit IP CTS providers from facilitating or otherwise playing a role in the acquisition of professional certifications by arranging, sponsoring, hosting, conducting, or promoting seminars, conferences, meetings, or other activities in community centers, nursing homes, apartment buildings, or any other location where hearing health professionals offer free hearing screenings. Generally, then, providers would be prohibited from

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Comments, CG Docket Nos. 13-24 and 03-123, at 1 (filed Mar. 12, 2013) (Purple 2013 Initial NPRM Reply Comments); Sprint Comments, CG Docket Nos. 13-24 and 03-123, at 7-8 (filed Feb. 26, 2013) (Sprint 2013 Initial NPRM Comments); USTelecom Comments, CG Docket Nos. 13-24 and 03-123, at 3-5 (filed Feb. 26, 2013) (USTelecom 2013 Initial NPRM Comments); *see also* Letter from Philip J. Macres, Counsel for TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 1-3 (filed Aug. 9, 2013) (urging the Commission to retain the independent, third-party certification requirement in favor of the \$75 Equipment Charge Rule); Letter from Philip J. Macres, Counsel for TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 3 (filed Aug. 13, 2013); Letter from John T. Nakahata, Counsel to CaptionCall, LLC, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 3 (filed Aug. 22, 2013) (Sorenson Aug. 22, 2013 *Ex Parte*).

³⁵⁸ *See* TEDPA Mar. 2015 *Ex Parte* at 2 (recommending these professional qualifications); Sorenson Aug. 22, 2013 *Ex Parte* at 3 (noting that such professionals "routinely administer hearing tests, and have specific training regarding hearing"); Letter from David O'Connor, Counsel for Hamilton Relay, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, at 2 (filed Aug. 15, 2013) (supporting a requirement for third-party professionals to be professionally qualified to evaluate hearing loss).

³⁵⁹ For example, a certification provided by a professional specializing in ophthalmology, dermatology, urology, radiology, podiatry, or pharmacy would not be qualified to evaluate an individual's need for IP CTS.

³⁶⁰ *See generally* 2013 IP CTS Reform Order, 28 FCC Rcd at 13441-43, paras. 45-48.

soliciting, facilitating, or collecting user certifications directly from hearing health professionals.³⁶¹ Rather, in order to become registered for IP CTS, we believe that consumers, rather than providers on their behalf, should initiate the process of obtaining a third-party certification. We believe that these neutrality requirements would impose minimal costs on IP CTS providers and hearing health professionals.³⁶² We seek comment on this view and on the costs and benefits of adopting this proposal (including its impact on consumers), as well as whether there are other types of relationships or interactions between providers and hearing health professionals that should be prohibited to ensure the latter's neutrality.

132. Third, we propose that before signing a certification as to a consumer's need for IP CTS, the certifying professional be required to (1) conduct functional assessments that evaluate the individual's need for IP CTS to achieve functionally equivalent telephone communication (as compared to a general determination of hearing loss) and (2) assess whether an amplified telephone or other services or devices would be sufficient to provide functionally equivalent telephone service for the applicant. For example, as appropriate to the communications needs of the IP CTS applicant, such evaluations could include testing the consumer's comprehension of telephone conversations using inductive coupling, enhanced amplification, Bluetooth technology that couples to the individual's hearing aid, handsets that allow customization of sound frequencies to match a person's specific hearing loss, or other available assistive or mainstream communication technologies.³⁶³ We seek comment on these proposed requirements and their costs and benefits, including whether an assessment that considers multiple options can enable professionals to more objectively determine a consumer's need for IP CTS. We also seek comment on the extent to which the proposed certification requirement would impose additional costs beyond those already incurred by IP CTS users, providers, hearing health professionals, and others in connection with such assessments.³⁶⁴ In addition, we seek comment on how the costs and benefits of user assessments, which are discussed in more detail above,³⁶⁵ differ based on whether such assessments are conducted by or under the supervision of state entities or by third-party professionals without supervision by state entities. We also seek comment on whether the Commission or contracting entities should establish an appeals process that would allow potential IP CTS users to contest the results of such assessment and, if so, what form such process should take.

133. Fourth, we propose to require IP CTS providers to accept only third-party professional certifications that are in writing, submitted under penalty of perjury, and include an attestation from the professional that he or she has conducted an evaluation of the individual in accordance with applicable professional standards and the Commission's rules, and that in the professional's opinion, the applicant

³⁶¹ Anecdotal evidence suggests that some providers solicit such certifications from professionals, after which the professionals act on such requests by getting permission from their clients to certify them for IP CTS—allowing the clients to get a free phone and service from the provider. The professionals then send their clients' contact information, along with their signed certifications of IP CTS need, back to the provider as "referrals," after which the provider arranges for installation of an IP CTS device in the residences of such individuals. To the extent this process occurs, it minimizes the consumer's role in initiating the request for the device and associated services, and might even result in the client feeling pressure from his hearing health professional to adhere to his or her recommendation to accept the device and begin using the services.

³⁶² See, e.g., Sorenson Jan. 12, 2018 *Ex Parte* at 2 (stating that CaptionCall currently requires third-party professionals to certify that they do not have any business, family or social relationship with any employee of Sorenson or CaptionCall).

³⁶³ See TEDPA Mar. 2015 *Ex Parte* at 2 (stating that the certification from an independent, third-party professional should be required to state that "an amplified telephone (with or without tone control) is not sufficient to provide functionally equivalent access to telephone service as determined by a *functional* assessment of the consumer by the third-party professional") (emphasis in original).

³⁶⁴ See, e.g., Sorenson Jan. 12, 2018 *Ex Parte* at 1-2 (describing the third-party professional certification that it currently requires for each new user).

³⁶⁵ See *supra* para. 125.

has a hearing loss that necessitates use of IP CTS for the individual to achieve effective telephone communication. We further propose that such attestation state that the professional understands, and has explained to the consumer, that (1) the captions used for IP CTS may be generated by a CA who listens to the other party on the line and provides the captions received by the IP CTS subscriber;³⁶⁶ and (2) there is a per-minute cost to provide captioning on each IP CTS call, which is funded through a federal program.³⁶⁷ This requirement will ensure that both the third-party professional and the consumer understand the nature of IP CTS, and help eliminate confusion between the costs associated with television captioning, which is not based on usage, and telephone captioning, for which there are ongoing, measured costs.³⁶⁸ We propose application of these certification requirements to all new users other than those who are able to document that they have obtained IP CTS devices from a state program administering this function.

134. Additionally, to assist with enforcement of these rules, we propose that each IP CTS provider be required to maintain a copy of each third-party professional certification for a minimum of ten years after termination of service to the consumer, and to make such records available to the TRS Fund administrator or the Commission upon request.³⁶⁹ We further propose that failure to provide such records may result in denial of compensation for minutes incurred by that user, and may be grounds for termination of a provider's certification to provide IP CTS. Finally, we propose that IP CTS providers be prohibited from disclosing users' certification information in a personally identifiable form, except upon request of the Commission or the TRS Fund administrator or as otherwise required by law.

135. We believe that such attestation and record storage requirements would impose minimal costs on IP CTS providers. We seek comment on this view and on the costs and benefits of adopting this proposal.

136. *Costs and Benefits of Ensuring Independent Assessments of IP CTS User Eligibility.* We seek comment on the costs and benefits of both approaches. We tentatively conclude that significant additional benefits, in the form of savings to the TRS Fund, will result if evaluations are more objective and better focused on an individual's ability to effectively communicate by telephone than the evaluations that are currently conducted. The amount of such savings will depend on how much unnecessary IP CTS usage is generated by users who do not need IP CTS, including those who can achieve effective telephone communication through other means, and how many such users would be filtered out by more effective evaluations.

137. Usage data provided by Rolka Loubé indicates that the average new IP CTS user adds approximately 1,250 minutes in the first year after initiating service. Accordingly, we estimate that the approximately 72,000 new users added in the course of a year will generate approximately 90 million

³⁶⁶ This portion of the attestation is only required to the extent that captions are produced in this manner and not exclusively through a non-CA assisted automatic speech recognition engine.

³⁶⁷ See TEDPA Mar. 2015 *Ex Parte* at 2 (recommending that certifications include language that "the third-party professional understands that the captions on captioned telephone service are provided by a live communications assistant funded through the federal TRS program and has advised consumer of same").

³⁶⁸ In this regard, we note that CaptionCall presents a course to hearing health professionals entitled, "The Importance of TV Closed Captioning & Captioned Telephone Service for People with Hearing Loss," which could mislead persons unfamiliar with the IP CTS compensation scheme into believing that there are no ongoing costs associated with their client's usage of this service. See TEDPA Nov. 2017 *Ex Parte*, Attach. at 27; see also *id.* at 19 (reporting on a CaptionCall presentation in which television closed captioning was highlighted as a means of providing visual access, and purportedly used to justify the use of IP CTS by people with any type of hearing loss).

³⁶⁹ See *Connect America Fund et seq.*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd 17663, 17864, paras. 620-21 (2012) (*UFC/ICC Transformation Order*) (adopting the 10-year record retention requirement for all high-cost support recipients); see also *id.* at 17818, paras. 476-78 (discussing the application of the 10-year record retention requirement specifically for Mobility Fund Phase I).

minutes of IP CTS in their first year of service.³⁷⁰ If, in the future, 10 percent of the IP CTS usage generated by new users results from registration of users who do not need IP CTS, then we estimate that improved screening of new users has the potential to save the Fund, in the first year, the cost of 9 million minutes (10 percent x 90 million), at a rate of \$1.58 per minute, or approximately \$14.2 million.³⁷¹ If 20 percent of such usage is unnecessary, the potential first year's savings would be approximately \$28.4 million.

138. We note that benefits to the Fund of ensuring appropriate usage accrue cumulatively over time. In the second year, a comparable amount of unnecessary usage from new users would be saved, and there would be continued savings from the users screened out in the first year. According to usage data provided by Rolka Loube, in a user's second year, the minutes of use for an average user drop to approximately 66 percent of the user's first-year minutes.³⁷² Thus, the minutes saved in the second year would be approximately 1.66 times those saved in the first year. If there is a further 10 percent reduction of the IP CTS compensation rate in Fund Year 2020-21, savings of unnecessary minutes and Fund expenditures in the second year would total approximately 14.9 million minutes and approximately \$21.1 million if 10 percent of usage is unnecessary,³⁷³ and approximately 29.8 million minutes and approximately \$42.2 million if 20 percent of usage is unnecessary. In the third and subsequent years, because of the continued savings from the screenings conducted in the first two years, we believe the amounts saved would continue to multiply. We seek comment on our tentative conclusion and the assumptions underlying these estimates.

E. Provider Practices

1. Communications and Messaging on IP CTS

139. In response to concerns raised in the record about what has been perceived as aggressive IP CTS messaging, some of which may be misleading or lacking complete information,³⁷⁴ we seek comment on measures to ensure that accurate information about IP CTS is being imparted by providers to consumers, service providers and other members of the public. The importance of ensuring the accuracy of marketing information is heightened by use of IP CTS predominantly by seniors, as they may be particularly vulnerable to schemes that could result in fraud and abuse.³⁷⁵

³⁷⁰ See *supra* para. 125 (estimating that approximately 6,000 new IP CTS users are added per month, which equates to 72,000 new IP CTS users per year). 72,000 users x 1,250 minutes per new user = 90 million minutes.

³⁷¹ This assumes that such screening is implemented beginning in Fund Year 2019-20. For that period, the interim compensation rate will be \$1.58 per minute. See *supra* para. 26. 9 million minutes x \$1.58 = \$14.2 million.

³⁷² Email and attachment from Kelly Kearn, Rolka Loube, to Robert Aldrich, CGB, FCC (Jan. 29, 2018) (Jan. 29, 2018 Rolka Data).

³⁷³ With a further 10 percent rate reduction in 2019-20, the compensation rate would be \$1.42 per minute. See *supra* para. 26. 14.9 million minutes x \$1.42 = 21.1 million.

³⁷⁴ See, e.g., TEDPA Nov. 2017 *Ex Parte*, Attach. at 9 (reporting that providers "are on a very active and aggressive campaign to get phones in every audiologist's office in the state . . . but offer little if [sic] no assistance beyond that"); *id.* at 17 (referencing a television commercial that "tends to be misleading and doesn't explain how the phone works."); *id.* at 11 (raising concerns about a flyer for hearing care professionals that explains "How to Talk About CaptionCall" because of its heavy emphasis on the amplification feature on IP CTS phones).

³⁷⁵ See, e.g., Princess Clark-Wendel, *Financial Fraud: The Top 4 Scams Against the Elderly*, (Sept. 9, 2014), <https://www.forbes.com/sites/sungardas/2014/09/09/what-everyone-should-know-about-financial-fraud-against-the-elderly/#68e726d222de> (describing seniors as the country's most vulnerable citizens); National Council on Aging, *Top 10 Financial Scams Targeting Seniors*, <https://www.ncoa.org/economic-security/money-management/scams-security/top-10-scams-targeting-seniors/> (last visited May 11, 2018) (noting that "financial scams targeting seniors have become so prevalent that they're now considered 'the crime of the 21st century.'"); Patti Neighmond, *Why It's*

140. *Written Marketing Materials.* We propose to require that all provider-distributed online, print, and orally delivered materials used to market IP CTS be complete and accurate. We seek comment on whether such a requirement would ensure that marketing materials make clear that IP CTS may not be necessary for everyone and that to qualify for IP CTS use, consumers with hearing loss must be able to certify that captioning is needed to enable them to understand telephone conversations. We believe this step can reduce the likelihood that such materials will encourage the inappropriate use of IP CTS.³⁷⁶ For example, this would prohibit currently advertised statements suggesting that any amount of hearing loss causing any degree of difficulty will qualify consumers for IP CTS.³⁷⁷ We also seek comment on whether and to what extent this proposed rule change, which may require reprinting of previously produced marketing materials, would impose a significant cost or administrative burden on providers.

141. We also continue to be concerned about advertised offers of a free phone for anyone with hearing loss who wants to subscribe to this service, which could both encourage consumers to sign up for IP CTS (just to obtain the phone) even if they do not need it and give such individuals the misimpression that the associated IP CTS services are also free. In addition to enticing consumers, we believe that the incentive of a free phone can sway the opinion of third-party professionals, whose certification may become more of a stamp of approval on a decision made by the consumer in response to provider marketing efforts, rather than an independent evaluation of the consumer's need for IP CTS.³⁷⁸ Would a requirement to eliminate from promotional materials, including print materials and websites, promises of a free phone for *anyone with hearing loss*, without specifying that this service (and the associated phones) are only intended for individuals who have a hearing loss that makes it difficult to use the phone, remove such improper incentives and reduce the number of consumers who sign up for IP CTS without a specific need for this service?³⁷⁹ We seek comment on the merits of taking this measure and how the First Amendment might apply in this context.

142. *Equipment Installer Notifications.* To ensure that consumers are given full information about the nature and costs of IP CTS prior to allowing providers to install these devices in their homes, we propose that whenever there is a home installation of an IP CTS device by a provider's employee, agent, or contractor, such installer must explain to the consumer, prior to conducting such installation: (1)

(Continued from previous page)

Easier to Scam the Elderly (Dec. 6, 2012), <http://www.npr.org/sections/health-shots/2012/12/06/166609270/why-its-easier-to-scam-the-elderly>.

³⁷⁶ In the accompanying Report and Order, we require IP CTS providers to place on their websites, advertising brochures, and other consumer education and informational materials certain factual notices aimed at preventing wasteful use of IP CTS. See *supra* Part III.B.2. Here, we address the content of such marketing materials to ensure that they convey accurate information about IP CTS.

³⁷⁷ See, e.g., CaptionCall, *Difficulty Hearing on the Phone?*, <https://captioncall.com/now/> (last visited May 14, 2018) (stating that IP CTS is “for anyone with hearing loss who has difficulty hearing on the phone”); E. E. Moran, CaptionCall Presentation Review, FSHHP Conference (July 15, 2017), available at TEDPA Nov. 2017 *Ex Parte*, Attach. at 19 (reporting on a presentation given by Teresa Shipman and Rich McCuen, on behalf of CaptionCall in which instructors allegedly encouraged all people with hearing loss, regardless of the severity of such loss, to use IP CTS).

³⁷⁸ See, e.g., *2013 IP CTS Reform Order*, 28 FCC Rcd at 13441-42, para. 46 (noting that “when consumers are drawn in initially by a provider's offer of a free phone, and only subsequently seek evaluation and certification by a professional, the professional's role is likely to change from helping the consumer select on the merits from a number of alternative assistive technologies, to accepting or vetoing a choice already made by the consumer, based on exposure to ads promoting the free availability of an IP CTS phone”).

³⁷⁹ Under this approach, after the consumer is determined by a third-party hearing health professional to be qualified for IP CTS, individuals would be permitted to receive an IP CTS device, in compliance with the D.C. Circuit's opinion in *Sorenson*.

the manner in which IP CTS works,³⁸⁰ (2) the per-minute cost of providing captioning on each call (i.e., the applicable rate of provider compensation), and (3) that the cost of captioning is funded through a federal program. We seek comment on this proposal.

143. *Incentives to Caretakers and Service Providers for Seniors.* It also has come to our attention that providers may be offering or providing incentives to caregivers and other professionals who provide services to senior citizens to give them the names of potential new users or to encourage clients to register for and use IP CTS. For example, one IP CTS provider's website directed to "Caregivers & Senior Living Professionals" directs such caregivers to order the IP CTS phone for their clients or residents by visiting the provider's website, completing an online order form for their clients, and making sure "to **use your unique promo code** so we can track that referral back to your office."³⁸¹ We propose to amend our rules to expressly prohibit providers from offering or providing any form of direct or indirect incentives, financial or otherwise, to any person or entity for the purpose of encouraging referrals of potential users, registrations, or use of IP CTS. We seek comment on this proposal.

144. We tentatively conclude that compliance with these requirements regarding marketing materials, notifications by equipment installers, and prohibition of certain incentives would impose minimal costs on IP CTS providers. We seek comment on this tentative conclusion and on the costs and benefits of adopting this proposal.

145. Finally, we seek comment on whether there are any other components of an IP CTS provider's public relations, marketing, media planning, product pricing and distribution, or sales strategy that could lead to waste, fraud, and abuse in the IP CTS program, and what rules we should adopt to halt such practices.

2. IP CTS Registration Renewal and Phone Reclamation

146. We seek comment on what rules are needed to prevent the unauthorized use of a registered user's IP CTS device after the authorized user ceases to use the service. Specifically, in light of the reportedly high level of attrition among IP CTS users,³⁸² we believe there is a risk that providers may not be notified when the registered user of an IP CTS device discontinues use, and that such users' IP CTS devices may end up in the possession of others who are not properly registered to use IP CTS. In this regard, we note that providers have an ongoing obligation to ensure the validity of the minutes they submit for compensation.³⁸³ To minimize the risk of inappropriate IP CTS use resulting from such churn, we propose to require that IP CTS providers biennially obtain from their users a self-certification of their continuing need to use IP CTS to achieve functionally equivalent telephone communication, and retain copies of each self-certification, as well as other registration information, for a period of ten years.³⁸⁴ Further, we propose to prohibit such providers from receiving compensation for IP CTS provided to any such individual who fails to re-certify within the specified interval or for calls associated with any device for which such certification was required. At present, we do not see the need to apply these new requirements to web and wireless IP CTS because we believe that the use of log-in credentials (which are

³⁸⁰ Until ASR is implemented, this will require provider representatives to notify consumers that IP CTS captions are generated by a CA who listens to the other party on the line and provides the captions received by the IP CTS subscribers.

³⁸¹ CaptionCall, *Caregivers & Senior Living Professionals*, <http://captioncall.com/educators-program/#eduHowTo> (last visited May 11, 2018) (emphasis in original).

³⁸² Commenters have reported that average IP CTS users tend to be of an advanced age. *2013 IP CTS Reform Order*, 28 FCC Rcd at 13452, para. 70; see also Letter from Philip J. Macres, Counsel for TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 25 (filed Apr. 26, 2013) (stating that a RERC-TA survey found that survey "respondents who use a special captioned phone are more likely to be older, retired and live alone" (emphasis omitted)).

³⁸³ 47 CFR § 64.604(c)(5)(iii)(D)(I) (requiring providers seeking compensation to provide true and adequate data).

³⁸⁴ See *UFC/ICC Transformation Order*, 27 FCC Rcd at 17864.

necessary to access such services) will reduce the likelihood of unauthorized use of such services upon their discontinuation by consumers who have been registered to use them. We seek comment on this belief.

147. We also seek comment on whether to require IP CTS providers to notify each individual who receives an IP CTS device, at the time of such receipt and initial registration, that the user has an obligation to ensure that the provider is notified if such user discontinues use of the captioning service. If this proposal is adopted, we further propose that recipients of IP CTS devices be permitted to fulfill such obligation either on their own or through a designated representative, at which time the provider would be required to terminate the provision of IP CTS via that device. We further seek comment on whether to adopt a rule requiring the provider to either disable the IP CTS capability of an end-user device or ensure that the consumer (or his or her designee) returns the device to the provider, after notification that the authorized user is no longer using the device for IP CTS. Finally, we seek comment on other steps that IP CTS providers should take to ensure that the person who initially registers for a captioning service remains the exclusive user of the captioning service provided on that user's device.

148. We believe that compliance with these registration renewal and phone reclamation requirements would impose minimal costs on providers. We seek comment on this view and on the costs and benefits of adopting these proposals.

3. Requiring an Easy Way to Turn Captions On or Off

149. We propose to require providers to ensure that their IP CTS equipment provides an easy way to turn captions *on or off*, either before placing a call or while a call is in progress. Currently, the Commission's rules require IP CTS telephones distributed by providers to include an easily operable feature to turn captions *on* through a single step.³⁸⁵ In 2013, the Commission adopted this "Captions-On Button Rule" in association with the Default-Off Rule,³⁸⁶ the latter of which required that captions automatically revert to "off" at the end of each call, necessitating the affirmative step of turning them back on at the start of each subsequent call. However, a consequence of the D.C. Circuit decision vacating the Default-Off Rule is that most IP CTS devices now automatically default to have captions *on* at the start of a call.³⁸⁷ We believe there now is a corresponding need to be able to easily turn captions *off* when captions are not needed.³⁸⁸

150. We also propose to prohibit provider practices designed to induce an individual to turn captions on, or leave them on, when that person otherwise would not do so. For example, anecdotal information suggests that, at one point in time, some phones were equipped with lights that blinked whenever captions were turned off, and that such blinking only ceased when the caller turned the captions back on. We believe it is inappropriate to employ a "captions-off indicator" that is disruptive to carrying on a telephone conversation, thus prompting the user to turn captions on even when they are not necessary to call comprehension.

151. Accordingly, we propose to require both (1) an easily operable button, icon, or other comparable feature that requires a single step for consumers to turn captioning on or off, and (2) a prohibition against the installation of features in provider-distributed services or devices that have the

³⁸⁵ 47 CFR § 64.604(c)(10).

³⁸⁶ 2013 IP CTS Reform Order, 28 FCC Rcd at 13498, App. B (§ 64.604(c)(10)(i)).

³⁸⁷ See *Sorenson*, 755 F.3d at 710.

³⁸⁸ This could occur, for example, when the IP CTS user is in a quiet environment, waiting on hold, or able to sufficiently amplify the other party's voice. It is also necessary to turn captions off when a person not registered for IP CTS uses the device as an ordinary or amplified phone.

foreseeable effect of encouraging IP CTS users to turn on captions even when they are not needed.³⁸⁹ We believe that compliance with these requirements would impose minimal costs on IP CTS providers. We seek comment on this view and on the costs and benefits of adopting these proposals as a means of reducing waste and improving the efficiency of IP CTS. We also seek comment on the amount of time that would be needed to effect their implementation.

F. Additional Measures

152. We also seek comment on additional steps we could take to help prevent waste, fraud, and abuse in the provision of IP CTS. What other measures could we implement to better ensure that limited program dollars are used to support the use of IP CTS by eligible individuals with hearing loss? For instance, do IP CTS providers currently have processes in place to enable or require call takers to identify individual calls or patterns of calls that may suggest noncompliance with program rules? Should the FCC impose requirements on providers that they enable or require CAs to flag individual calls that may suggest that IP CTS functionality is being used improperly? For example, some consumers in a household may use captioning features who do not actually need them.³⁹⁰ Should any steps we take focus on individual calls or identified patterns? Should IP CTS providers have an obligation to report any such flags to the TRS Fund administrator or the FCC? Should we take steps to ensure that any particular calls where IP CTS is improperly used are not compensated out of program dollars? Are there auditing procedures that the FCC, the TRS Fund administrator, or IP CTS providers should take to identify any such calls and to ensure providers are offering IP CTS only to eligible consumers?

153. We also seek comment on whether the FCC should consider additional measures to ensure call quality for 911 calls made using IP CTS. Given the important and often exigent circumstances associated with 911 calls, the Commission previously adopted rules requiring IP CTS providers to transfer emergency calls to 911, to prioritize emergency calls, and to communicate essential information to first responders answering 911 calls.³⁹¹ Are these requirements sufficient to ensure proper emergency call handling by IP CTS providers? The Commission also has taken enforcement action against several IP CTS providers for failures to relay 911 calls as required by our rules.³⁹² Are IP CTS providers taking sufficient steps to detect and remedy 911 call failures? Have callers encountered technical difficulties or call quality issues when making 911 calls? To what extent should the Commission adopt standards for the accuracy and synchronicity of captions on 911 calls handled by IP CTS providers, to enable the effective and timely exchange of information in an emergency? Are there other minimum criteria that should be established for such calls? Are there unique challenges with respect to relaying calls to 911 associated with any of the methods used to generate IP CTS captions (i.e., fully automated ASR, CA-assisted ASR or stenographic supported captions)?³⁹³ Finally, are additional auditing requirements, beyond those already governing TRS providers,³⁹⁴ necessary to ensure compliance with the Commission's 911 IP CTS call handling requirements? For example, should we conduct regular testing to ensure such compliance? We ask commenters to address the costs and benefits associated with any proposed measures.

G. Technological Advances

154. We seek comment on the extent to which alternative communication services and

³⁸⁹ We note that a requirement to facilitate turning captioning off is different than a requirement to have captions defaulted to off at the start of each call, and therefore not inconsistent with the D.C. Circuit's opinion in *Sorenson*.

³⁹⁰ See *supra* para. 10.

³⁹¹ 47 CFR § 64.605(a).

³⁹² See, e.g., *Sprint Corporation*, Order, 30 FCC Rcd 10059 (2015); *Hamilton Relay, Inc.*, Order, 30 FCC Rcd 10081 (2015); *InnoCaption, Inc.*, Order, 30 FCC Rcd 10101 (2015).

³⁹³ See, e.g., *Hamilton* May 24, 2018 *Ex Parte* at 2; *Consumer Groups* May 25, 2018 *Ex Parte* at 4.

³⁹⁴ 47 CFR § 64.604(c)(5)(iii)(D)(6).

applications, which are not funded through the TRS program, can complement or reduce reliance on IP CTS.³⁹⁵ For example, to what extent can amplified telephones, high definition VoIP services (HD voice) over wired and wireless networks,³⁹⁶ video over broadband and cellular networks, noise-canceling techniques, audio personalization,³⁹⁷ and various forms of text-based communications—for example, real-time text (RTT),³⁹⁸ e-mail, short messaging services, instant messaging, and online chat sessions—meet the communications needs of people with hearing and speech disabilities? To the extent that these mainstream technologies enable functionally equivalent access to voice telephone services for some individuals, we believe they may reduce reliance on IP CTS and thereby help preserve the TRS Fund for others for whom IP CTS is essential for telephone communication. We seek comment on this belief, and whether there are registered IP CTS users who only use their IP CTS devices in certain situations, but rely on more direct alternatives, such as phone amplification, in other situations. We further seek comment on how we can collect data on the potential markets for these off-the-shelf technologies, as well as their usage by individuals who are current or potential users of IP CTS.

VI. NOTICE OF INQUIRY

155. In this Notice of Inquiry (NOI), we seek comment on establishing objective, quantifiable, and measurable performance goals and service quality metrics to evaluate the efficacy of the IP CTS program.³⁹⁹ By developing well-defined measures of IP CTS performance, the results of which can be made transparent to the public, we seek to enable consumers to make more informed decisions in their selection of IP CTS providers, and to allow this program to evolve as technological changes are adopted in the telecommunications industry.

A. Performance Goals

156. We seek comment on appropriate performance goals for the IP CTS program. The Commission's objective here is to state these goals in terms that lend themselves to evaluating progress toward achieving the Congressional objectives set forth in section 225 of the Act. Once established, we anticipate that the performance measures established through this proceeding will significantly enhance

³⁹⁵ RAZ Mobility June 1, 2018 *Ex Parte* at 1 (requesting that the Commission seek comment on whether new technologies can offer functional equivalency and reduce costs compared to IP CTS).

³⁹⁶ HD voice is an IP-based standard for voice quality that extends the audio frequencies available on a telephone call and incorporates noise-cancelling technologies to create a more natural sounding call. *See Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets; Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*, Fourth Report and Order and Notice of Proposed Rulemaking, 30 FCC Rcd 13845, 13859-60, para. 28 & n.79 (2015).

³⁹⁷ According to RAZ Mobility, an audio personalization service can be used to personalize a person's smartphone audio based on the individual's personal hearing profile. *See* RAZ Mobility June 1, 2018 *Ex Parte* at 1.

³⁹⁸ RTT is text communication transmitted immediately as it is created, e.g., on a character-by-character basis. 47 CFR § 67.1.

³⁹⁹ In 2015, the Government Accountability Office (GAO) released a report: GAO, Report to Hon. Jeff Sessions, U.S. Senate, Telecommunications Relay Service: FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities, GAO-15-409 (Apr. 2015), <http://gao.gov/assets/670/669916.pdf> (GAO Report). Relying on GAO's own work on standards for internal control and the GPRA Modernization Act of 2010, codified at 5 U.S.C. § 306 and 31 U.S.C. §§ 1115-1116, GAO recommended that the Commission develop goals along with specific performance measures crafted around those goals to determine if in an objective, quantifiable way TRS is fulfilling its purpose of making available functionally equivalent telecommunications services to persons with hearing and speech disabilities. GAO Report at 3 (explaining the standards against which the FCC's program management was measured). GAO explained that "[p]erformance measurement is critical to determining a program's progress in meeting its intended outcomes and allowing Congress, FCC, and [Rolka Loubé] to assess the effectiveness of the TRS program and determine if operational changes are needed." *Id.* at 20. This proceeding responds in part to the GAO Report with respect to IP CTS. We recently sought comment on performance goals and objectives for VRS. *VRS Improvements NOI*, 32 FCC Rcd at 2464-68, paras. 62-77.

the Commission's ability to serve TRS users and to ensure that the TRS program is effective in achieving good stewardship of the TRS Fund.

157. We believe that the primary goals for the IP CTS program should be (1) to make communications services available to individuals with communications disabilities that are functionally equivalent to communications services used by individuals without such disabilities; (2) to keep up with technological changes and advances in the telecommunications industry; and (3) consistent with the concepts of good government and proper stewardship of the Fund, to improve the efficiency of IP CTS, and reduce the incidence of waste, fraud, and abuse. Below we discuss each of these goals, along with the performance metrics to which we believe they should be linked. We seek comment on whether these or other goals are appropriate for assessing the IP CTS program and IP CTS provider performance.

158. *Goal #1: Functional Equivalence.* Given the requirement in section 225 of the Act for the Commission to ensure, to the extent possible, the availability of TRS for people with hearing or speech disabilities that is functionally equivalent to voice telephone services used by people without such disabilities,⁴⁰⁰ we seek comment on whether we should set as our first goal that communications services used by these populations be comparable to communications services used by the general public, including communications that take place over the PSTN, cellular networks, and VoIP transmissions. In April 2011, consumer groups suggested that functional equivalence be defined as enabling “[p]ersons receiving or making relay calls . . . to participate equally in the entire conversation with the other party or parties and . . . experience the same activity, emotional context, purpose, operation, work, service, or role (function) within the call as if the call is between individuals who are not using relay services on any end of the call.”⁴⁰¹ We seek comment on the extent to which this is an appropriate definition of functional equivalence for the purpose of defining this performance goal.

159. *Goal #2: Technological Advances.* Section 225 directs the Commission to adopt regulations that encourage “the use of existing technology and . . . do not discourage or impair the development of improved technology.”⁴⁰² We therefore ask whether the second goal of the IP CTS program should be to ensure that this program utilizes technological changes and advances in the telecommunications industry to the greatest extent possible, as needed to achieve functionally equivalent communication for this population. This goal would not be limited to current technological capabilities, but rather seek to ensure that people with communication disabilities are able to take full advantage of innovative communication technologies, such as ASR, as these continue to be developed. We seek comment on this goal, and more specifically, on how the use of mainstream and off-the-shelf technologies can provide functional alternatives to, or supplement, IP CTS in meeting the needs of individuals who are deaf, hard of hearing, deaf-blind, or have speech disabilities. For example, to what extent can individuals who use IP CTS also be able to communicate directly with others through the use of amplified telephones, high definition VoIP services over wired and wireless networks, video over broadband and cellular networks, and text-based communications (i.e., electronic messaging services, such as e-mail, short messaging service, instant messaging, and online chat sessions)?⁴⁰³ We ask commenters to address the types of circumstances when these or other emerging technologies can be used to provide functionally equivalent telephone communication for people with communications disabilities. What steps, if any, should the Commission be taking to foster such direct communication solutions?

⁴⁰⁰ 47 U.S.C. § 225(a)(3), (b)(1).

⁴⁰¹ Letter from Tamar Finn, Counsel to Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 10-51, Attach. at 1 (filed Apr. 12, 2011) (“Consumer Groups’ TRS Policy Statement – Functional Equivalency of Telecommunications Relay Services: Meeting the Mandate of the Americans with Disabilities Act”).

⁴⁰² 47 U.S.C. § 225(d)(2).

⁴⁰³ See, e.g., *RTT Order*, 31 FCC Rcd at 13602, para. 66 (requiring Tier I service providers choosing to support RTT in lieu of TTY for IP wireless services to begin deploying RTT by the end of 2017).

160. *Goal #3: Provision of Service in the Most Efficient Manner.* Section 225 directs that TRS be made available “in the most efficient manner.”⁴⁰⁴ To this end, we ask whether the third program goal should be to improve the efficiency of the IP CTS program and to reduce this program’s incidence of waste, fraud, and abuse. We also seek comment on whether efficiency can be measured solely in terms of the cost incurred to achieve a certain level of functional equivalence, or whether there are additional factors, such as timeliness and effectiveness, that should go into this determination. We further seek comment on how this goal should be balanced against the performance goal of ensuring the provision of a functionally equivalent conversational experience through IP CTS.

B. Performance Measures

161. To ensure that our performance goals are being met, we must define measurements that can provide valuable empirical evidence to objectively assess these goals. In addition to enabling the Commission to track the progress and success of the IP CTS program, these measurements will provide valuable empirical evidence for Commission policy makers to craft rules for effective implementation and oversight of the IP CTS program, as well as to ensure that consumers are provided with the information they need to make informed choices in their selection of provider services.

162. Some of these metrics may be observed automatically, e.g., by call processing logs or other measurement tools, while others may require evaluation by IP CTS users or human subject matter experts. We seek comment on whether the derivation of data used to measure IP CTS service quality should be overseen by the TRS Fund administrator or otherwise developed through contractual or similar arrangements with independent third parties selected by the Commission. We believe that calculations resulting from IP CTS performance measures will have greater efficacy if they are conducted independently (i.e., not by the regulated entities).⁴⁰⁵

163. We also seek comment on whether we should publish the metrics achieved for each provider, as it appears likely that making these results available to the public in a standard format will aid users in their selection of IP CTS providers. If shared publicly, we seek comment on the merits of developing a system by which IP CTS users can rate the quality and performance of IP CTS calls (based on the metrics discussed below) to increase competition. Finally, we seek comment on how such information should be presented to users, and whether there are concerns with such information being utilized in outreach or marketing materials.

1. Functional Equivalence

164. In the *2013 IP CTS Reform FNPRM*, the Commission sought comment on establishing certain mandatory minimum requirements to ensure the functional equivalency of telephone communication via IP CTS, including the speed and accuracy of captioning, as well as the appropriate balance between these two measures.⁴⁰⁶ Based on input received in response (most of which supports the adoption of measurable standards for this purpose),⁴⁰⁷ quality and usability assessments performed under

⁴⁰⁴ 47 U.S.C. § 225(b)(1).

⁴⁰⁵ See *2017 VRS Improvements NOI*, 32 FCC Rcd at 2465, para. 66.

⁴⁰⁶ See *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13485, paras. 141-42. For example, the Commission asked whether providers should be permitted to compromise speed in favor of greater accuracy or vice versa. *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13485, para. 142.

⁴⁰⁷ See Hamilton 2013 FNPRM Comments at 12-14; Hamilton 2013 FNPRM Reply Comments at 10-11; Sprint Reply Comments, CG Docket Nos. 13-24 and 03-123, at 7-8 (filed Dec. 4, 2013) (Sprint 2013 FNPRM Reply Comments); Consumer Groups 2013 FNPRM Comments at 20; Miracom 2013 FNPRM Comments at 2-4; Ultratec Reply Comments, CG Docket Nos. 13-24 and 03-123, at 8-10 (filed Dec. 4, 2013) (Ultratec 2013 FNPRM Reply Comments). *But see* Sorenson 2013 FNPRM Comments at 30-31; Sorenson 2013 FNPRM Reply Comments at 14-15 (maintaining that each IP CTS user should be allowed to make their own choice between providers—for example, based on how each user prioritizes speed and accuracy).

contract with MITRE,⁴⁰⁸ and recommendations from the Commission's Disability Advisory Committee (DAC),⁴⁰⁹ we seek comment on use of the following metrics to measure IP CTS service quality: (1) transcription accuracy; (2) transcription synchronicity; (3) transcription speed; (4) speed of answer; (5) dropped or disconnected calls; (6) service outages; and (7) usage data. How frequently should such testing or data gathering be performed and how should the information from such testing be reported?⁴¹⁰

165. *Transcription Accuracy.* We believe that standard measurements of captioning accuracy (using either CA-assisted and ASR versions) are needed to effectively measure functional equivalence on a regular basis, and seek comment on this belief, as well as on the appropriate components that should go into such assessments.⁴¹¹ We note that the Commission has defined accuracy in the context of closed captioning for video programming as including (in relevant part) considerations for the order of the words, proper spelling and punctuation, and correct tense.⁴¹² We seek comment on whether these guidelines are appropriate for IP CTS, and if so, how they should be measured. Should we adjust accuracy measurements or standards to take account of the type of call measured, e.g., calls to 911 or calls for services that use a specialized vocabulary, such as calls pertaining to medical, legal, or technical computer support?

166. What methods do providers currently use to evaluate the accuracy of IP CTS transcription? Are there metrics used to assess the accuracy of computer-assisted real-time translation (CART) or court reporting that could be effectively applied to IP CTS? The DAC suggests evaluating accuracy by calculating major errors (i.e., errors that change the meaning of a transcription) and minor errors (i.e., errors that while technically incorrect, do not substantively change the meaning of the transcription).⁴¹³ MITRE suggests differentiating between transcription completeness and accuracy.⁴¹⁴ It defines completeness as a measure of all the words transcribed, whether correctly or incorrectly as a percentage of the total words spoken, and accuracy as the percentage of words from the conversation that are correctly transcribed on the screen.⁴¹⁵ Another way of assessing accuracy may be to examine the semantic error rate, which, according to one source, considers "the fraction of utterances in which we misinterpret the meaning."⁴¹⁶ Additionally, should transcription readability, which can be affected by correct punctuation and capitalization, be a component of accuracy?⁴¹⁷ We seek comment on whether and how these various factors should be used to measure IP CTS accuracy, whether CA-assisted or entirely automated through ASR, and any other metrics that the Commission should use for this purpose.

⁴⁰⁸ See MITRE Phase 2 Summary; see also Letters from Tom Wheeler, Chairman, FCC, to Members of Congress, OL Docket No. 15-9 (July 10, 2015), https://apps.fcc.gov/edocs_public/attachmatch/DOC-334444A1.pdf (concerning a GAO Report on Management of Program to Assist with Hearing or Speech Disabilities).

⁴⁰⁹ Recommendation of the FCC DAC, IP CTS Quality Standards, CG Docket Nos. 03-123 and 13-24 (filed Sept. 23, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-341497A1.pdf (DAC Sept. 2016 Recommendation).

⁴¹⁰ The DAC recommends that at least monthly testing should be performed to determine compliance and suggests reliance on both provider self-testing and independent third-party testing. *Id.* at 3.

⁴¹¹ See *id.* at 1-2 (recommending the Commission establish metrics and measures for IP CTS accuracy).

⁴¹² 47 CFR § 79.1(j)(2)(i).

⁴¹³ DAC Sept. 2016 Recommendation at 1-2. The DAC suggests missing words could be either major or minor errors. *Id.* at 1.

⁴¹⁴ See MITRE Corporation, Internet Protocol Caption Telephone Service (IP CTS) Devices: Summary of Phase 1 Activities (2017), CG Docket Nos. 03-123 and 13-24 at 4-6 (posted Apr. 11, 2018), <https://ecfsapi.fcc.gov/file/10411287298464/MITRE%20Corporation%20Summary%20of%20Phase%201.pdf> (MITRE Phase 1 Summary) (measuring completeness and accuracy separately).

⁴¹⁵ See *id.* at 4, 6.

⁴¹⁶ Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 1 at 2.

⁴¹⁷ See *id.*, Attach. 2 at 5.

167. Finally, we seek comment on the tools that should be used to evaluate transcription accuracy given that our rules prohibit TRS providers from retaining records of the content of any conversation beyond the duration of a call.⁴¹⁸ Are there real-time or other methods that can be used to measure the accuracy of calls consistent with this prohibition? For example, should we use anonymous callers to make and record call interactions for later analysis by experts? Alternatively, should we have independent third parties test transcription accuracy using test call scripts?⁴¹⁹

168. *Transcription Synchronicity.* We next ask whether the Commission should measure the synchronicity of communications during an IP CTS call as a measure of functional equivalency. While we recognize that there is necessarily some delay during IP CTS calls that are handled by third-party CAs, we believe that functional equivalency requires that this delay be kept to a minimum, and that captions should begin to appear at the approximate time that the corresponding speech begins and end approximately when the speech ends.⁴²⁰ MITRE, the DAC, and other commenters agree that measuring transcription delay is appropriate for IP CTS quality testing.⁴²¹ Accordingly, we seek comment on use of synchronicity as an appropriate metric, and how best to assess it, reminding commenters of our suggestion in the *2013 IP CTS Reform FNPRM* to calculate the lag time between the hearing party's response and the time when the captions appear.⁴²² MITRE proposes a slight variation, to define transcription delay as the time elapsed from when an IP CTS user hears the other party's voice on a caption phone to when captions of that speech are displayed on the phone's screen.⁴²³ We seek comment on each of these approaches.

169. We also seek comment on methods that may be available to evaluate the synchronicity of captions. Should providers be required to collect and report the amount of transcription delay on each IP CTS call? Alternatively, should we have independent third parties test for this delay using test scripts? How should the information from the testing be reported and how frequently should such testing and data gathering be performed? To the extent that a delay occurs, we seek comment on how we should factor in its causes, be they technical, network- or equipment-related, or dependent on the speech of the party whose conversation is being captioned.

170. *Transcription Speed.* We seek comment on the need to measure the speed of IP CTS transcription. The DAC proposes defining transcription speed by calculating the number of words transcribed divided by the time needed to transcribe those words (measured in seconds) and multiplied by

⁴¹⁸ 47 CFR § 64.604(a)(2).

⁴¹⁹ The DAC recommends that standard test scripts should follow a natural telephone conversation and be developed based on industry standards, with appropriate consideration of the type and complexity of vocabulary and speed of delivery. DAC Sept. 2016 Recommendation at 2. The DAC also states that, due to a wide range of quality issues such as telephone audio (including static, distortion, inaudible or unintelligible conversation, and background noises), various accents and regional dialects, a controlled environment works best to measure this standard. *Id.* The DAC also recommends that any scripts used for third-party testing should not be given or identified to relay providers. *Id.* at 3.

⁴²⁰ This is consistent with the Commission's requirement for closed captions on video programming to be synchronous with the programming's audio content, which requires a match between captions and the spoken words "to the greatest extent possible." 47 CFR § 79.1(j)(2)(ii); *see also* Sorenson Nov. 28, 2017 *Ex Parte*, Attach. 2 at 5 (noting that the benefit of captions to users with hearing loss "decreases if the transcription has a long lag relative to the audio").

⁴²¹ *See* MITRE Phase 1 Summary at 6. The DAC also recommends the Commission adopt a metric for caption delays and recommends the Commission conduct a controlled study to determine the amount of delay that is generally acceptable to the average IP CTS user, while still receiving a functionally equivalent experience. DAC Sept. 2016 Recommendation at 2-3.

⁴²² *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13485, paras. 141-42.

⁴²³ *See* MITRE Phase 1 Summary at 6.

60.⁴²⁴ Suggesting that speed cannot be accurately measured for live calls because the speaking speed of the non-captioned telephone user is unknown and there may be “silence gaps” during conversations, the DAC instead proposes to rely on test scripts to measure compliance with speed requirements.⁴²⁵ We seek comment on the feasibility of measuring the speed of live calls, as well as the use of test scripts versus other methods to assess this metric. Are there environmental or other factors that may affect whether a speed test using a test script accurately reflects transcription speed on a live call? We also seek comment on whether the TRS Fund administrator or an independent third-party contracted by the Commission should conduct speed tests and the frequency with which these tests should be performed.⁴²⁶

171. *Speed of Answer.* Commission rules require that 85 percent of all IP CTS calls be answered within ten seconds. Providers must include data that enables tracking of their speed of answer in their CDRs and related filings submitted to the TRS Fund administrator. We currently measure speed of answer for IP CTS calls by the time it takes for CAs to establish the connection between an IP CTS user’s request for captioning and the start of captioning services. The collection of this data enables the Commission to monitor the extent to which provider connection time for IP CTS users is comparable to the connection time for voice telephone users. We seek comment on inclusion of this metric to assess functional equivalency, and how it can best be measured. Should we rely on IP CTS providers to measure and report their connection delay, or use independent third parties for this purpose? How frequently should we test and require the reporting of connection delays?

172. *Dropped or Disconnected Calls.* We seek comment on whether to track and measure the percentage and frequency of “dropped” or disconnected calls, and to compare these results with the various telephone communication technologies used by the hearing community. We believe that to achieve functional equivalency, the number of dropped or disconnected IP CTS calls should be comparable to the number of dropped or disconnected voice calls placed by the hearing public. We seek comment on use of this metric for this purpose, and how such data should be compared with dropped or disconnected telephone calls made over mainstream voice networks. Should such data be collected through user feedback, test calls, by analyzing provider logs or by a combination of these measures? We further seek comment on how such data should be presented to IP CTS users, if made publicly available.

173. *Service Outages.* Commission rules require all Internet-based TRS providers to notify the Commission in the event of an unplanned service outage of any duration or a voluntary service interruption of less than 30 minutes, and to seek advance approval for voluntary interruptions of longer duration.⁴²⁷ In addition, redundancy of facilities is a requirement for all forms of TRS.⁴²⁸ In general, to achieve functional equivalence, we believe that the frequency and extent of IP CTS service outages and interruptions should not exceed that of outages and interruptions occurring on transmission services used by hearing people. We seek comment on this belief and use of this metric to measure the goal of functional equivalency.

174. *Usage Data.* One measure of determining the extent to which IP CTS is successfully providing functionally equivalent communication is the extent to which this service is being used by

⁴²⁴ DAC Sept. 2016 Recommendation at 2.

⁴²⁵ *Id.*

⁴²⁶ The DAC recommended that the Commission consider the frequency of testing with all of its proposals, suggesting at least monthly testing, and recommending both provider self-testing and independent third-party testing. *Id.* at 3.

⁴²⁷ 47 CFR § 64.606(h)(3).

⁴²⁸ *See id.* § 64.604(b)(4)(ii) (requiring TRS to have “redundancy features functionally equivalent to the equipment in normal central offices, including uninterruptible power for emergency use”).

people with hearing disabilities who are in need of this service.⁴²⁹ While the Commission generally gathers data on minutes of use, at present, the Commission lacks conclusive information about the number of eligible individuals using IP CTS in the United States. However, this data could be obtained through collection in the TRS-User Registration Database (TRS-URD).⁴³⁰ After measures are implemented to prevent individuals from using this service if they do not need it,⁴³¹ when measured against demographic statistics regarding various kinds and levels of hearing loss, this metric may help to assess the program's success and determine whether functionally equivalent communication via IP CTS has been made available "to the extent possible," as mandated by section 225(b) of the Act. We also seek comment from IP CTS providers on what kind of information they collect about the demographics of their users, and invite them to submit summaries of such information.

175. We seek comment on whether there are other metrics that the Commission should consider for measuring the extent to which IP CTS call quality achieves functional equivalency for its users.

2. Technological Advances

176. As noted above, there may be several new technologies that can provide effective alternatives or supplements to IP CTS, depending on the situation. In addition to the various text and video capabilities on smart phones, tablets, desktops, and laptops that enable direct communications, other innovations, such as RTT, may provide individuals with communication disabilities with an opportunity to communicate directly with each other. The DAC also recommends that the Commission seek information on how IP CTS may benefit from the introduction of HD/wide band audio and other technological improvements.⁴³² We seek comment on ways to measure the extent to which evolving communications technologies can provide functionally equivalent communications services for people with disabilities who cannot use traditional voice telephone options. For example, we seek comment on whether and how we should assess the extent to which these alternative technologies can improve the accuracy, synchronicity, speed of answer, frequency of dropped or disconnected calls, and frequency of service outages of telephone calls placed by such individuals. We ask commenters who have made such measurements to submit their data.

177. We believe that, consistent with section 225(d)(2), the Commission should encourage the use of off-the-shelf or assistive technologies to achieve direct calling arrangements, so long as the service quality afforded by these technologies represents at least the same level as, or is an improvement over, the level of quality realized by using IP CTS, and seek comment on this belief. In this regard, we note that whether an individual's use of any off-the-shelf or assistive technology creates a functionally equivalent direct calling experience will always be unique to the individual. Is there some minimum level of service quality below which the use of off-the-shelf or assistive technologies to achieve direct calling arrangements should not be encouraged?

⁴²⁹ See 47 U.S.C. § 225(b)(1) (stating that "the Commission shall ensure that interstate and intrastate telecommunications relay services are available, to the extent possible and in the most efficient manner, to hearing-impaired and speech-impaired individuals in the United States").

⁴³⁰ The TRS-URD is a centralized system of records containing TRS user identification data that enables the Commission to ensure that only individuals properly registered to use TRS are able to utilize these services. 47 CFR § 64.601(a)(40). The TRS-URD has been activated for VRS, and the Commission is considering whether to expand the database to include IP CTS user data. See *Video Relay Service Providers May Begin Submitting Data to the TRS User Registration Database*, Public Notice, 32 FCC Rcd 10467 (OMD 2017); *2013 IP CTS Reform FNPRM*, 28 FCC Rcd at 13479-80, para. 128.

⁴³¹ The Commission is taking measures in the Report and Order and proposing additional measures in the Further Notice to curb wasteful provision of this service that we believe to be inflating its usage. See *supra* Parts III.B and V. C, D, E, and F.

⁴³² DAC Sept. 2016 Recommendation at 3.

178. We further seek comment on how we can collect data on the potential markets for these off-the-shelf technologies, as well as their usage by individuals who are current or potential users of IP CTS. We believe we can better achieve our goal of ensuring that individuals with disabilities make use of technological advances with a more complete understanding of who uses IP CTS as compared to alternative means of communication. For example, are there registered IP CTS users who only use their IP CTS devices in certain situations, but rely on more direct alternatives, such as phone amplification, in other situations? What measures should be used to evaluate the extent to which alternatives to IP CTS are being used by people with hearing or speech disabilities? For example, should the Commission contract for a survey of deaf and hard of hearing individuals to collect such information?

179. In addition, we seek comment and data on the extent to which any existing TRS regulations “discourage or impair the development of improved technology.”⁴³³ We ask commenters to specifically identify such regulations and whether they should be amended.

3. Program Efficiency

180. In addition to helping the Commission determine the success of the IP CTS program’s efforts to ensure that people with disabilities have telecommunications access, data on potential and existing IP CTS users can help ensure that waste, fraud, and abuse of the TRS program are kept to a minimum. Abusive practices by service providers and calls by ineligible users have, at various times during the history of TRS, presented a threat to the TRS program. In the accompanying Further Notice, the Commission seeks comment on a number of rules to ensure that IP CTS is used only for its intended purposes in an attempt to curtail potential waste in this program. Accurate information about the number of users and the frequency and duration of their calls will assist the Commission in protecting program integrity and ensuring that this program is being used properly in accordance with Congress’s goal of ensuring effective telecommunications access to people with communication disabilities. We seek comment on metrics that would be appropriate to ensure the efficiency of the IP CTS program.

181. *Other Measures.* We seek comment on other metrics we could employ to measure the performance goals for IP CTS. Commenters should address, with specificity, what should be measured, how it should be measured, and how often it should be measured, along with any estimated costs and benefits of such measurements.

VII. PROCEDURAL ISSUES

182. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended (RFA),⁴³⁴ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix D.

183. *Initial Regulatory Flexibility Analysis.* As required by the RFA, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document.⁴³⁵ The IRFA is set forth in Appendix E. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Further Notice. The Commission will send a copy of the Further Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.⁴³⁶ In addition, the Further Notice and IRFA (or summaries thereof) will be published in the *Federal Register*.⁴³⁷

184. *Paperwork Reduction Act Analysis – Report and Order.* The Report and Order adopts

⁴³³ 47 U.S.C. § 225(d)(2).

⁴³⁴ 5 U.S.C. § 601 *et seq.*

⁴³⁵ Pub. L. No. 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

⁴³⁶ *See* 5 U.S.C. § 603(a).

⁴³⁷ *Id.*

new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA).⁴³⁸ The new information collection requirements will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA.⁴³⁹ Prior to submission to OMB, the Commission will publish a notice in the *Federal Register* seeking public comment on the new information collection requirements contained in this proceeding. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, that notice will also seek comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.⁴⁴⁰

185. *Paperwork Reduction Act Analysis – Further Notice.* The Further Notice seeks comment on proposed rule amendments that may result in new or modified information collection requirements. If the Commission adopts any new or modified information collection requirements, the Commission will publish another notice in the *Federal Register* inviting the public to comment on the requirements, as required by the PRA.⁴⁴¹ In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.⁴⁴²

186. *Comments.* Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See FCC, Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (May 1, 1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs/filings>.
- Paper Filers:
 - Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
 - Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington, DC 20554.

187. *People with Disabilities:* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY), or 844-432-2275 (videophone).

⁴³⁸ Pub. L. No. 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

⁴³⁹ 44 U.S.C. § 3507(d).

⁴⁴⁰ Pub. L. No. 107-198, 116 Stat. 729 (2002); 44 U.S.C. § 3506(c)(4).

⁴⁴¹ 44 U.S.C. §§ 3501-3520.

⁴⁴² *Id.* § 3506(c)(4).

188. *Ex Parte Rules.* The proceeding this Further Notice and NOI initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.⁴⁴³ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with section 1.1206(b). In proceedings governed by section 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

VIII. ORDERING CLAUSES

189. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 201(b), and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 201(b), 225, the foregoing Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry ARE ADOPTED, and the Commission’s rules are hereby AMENDED as set forth in Appendix B.

190. IT IS FURTHER ORDERED that this Report and Order SHALL BE EFFECTIVE 30 days after publication of a summary in the Federal Register, except that the IP CTS compensation rate adopted for the 2018-19 Fund Year SHALL BE EFFECTIVE July 1, 2018, and the amendments to 47 CFR §§ 64.604(c)(11), 64.604(c)(13), and 64.615(a), which contain new or modified information collection requirements SHALL BE EFFECTIVE on the date specified in a notice published in the *Federal Register* announcing Office of Management and Budget approval of the information collection requirements of such rules pursuant to the Paperwork Reduction Act.

191. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of the Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

192. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of the Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry, including the Final Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch

⁴⁴³ 47 CFR § 1.1200 *et seq.*

Secretary

APPENDIX A**List of Commenting Parties****2013 IP CTS Initial NPRM Comments**

Adult Loss of Hearing Association (ALOHA)
Collaborative for Communication Access via Captioning (CCAC)
CTIA—The Wireless Association (CTIA)
Hamilton Relay, Inc. (Hamilton)
Hearing Loss Association of America (HLAA)
Miracom USA, Inc. (Miracom)
Rehabilitation Engineering Research Center on Telecommunications Access (RERC)
Sorenson Communications, Inc. and CaptionCall, LLC (Sorenson)
Sorenson Paperwork Reduction Act Comments
Sprint Corporation
Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), Association of Late-Deafened Adults, Inc. (ALDA), National Association of the Deaf (NAD), Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), Cerebral Palsy and Deaf Organization (CPADO), California Coalition of Agencies Serving the Deaf and Hard of Hearing (CCASDHH), and American Association of the Deaf-Blind (AADB)
The United States Telecom Association (USTelecom)

2013 IP CTS Initial NPRM Reply Comments

TDI, ALDA, NAD, DHHCAN, CPADO, CCASDHH and AADB
Dana Mulvany
Hamilton
HLAA
Purple Communications, Inc. (Purple)
RERC
Sorenson
Ultratec, Inc. (Ultratec)

2013 IP CTS Reform FNPRM Comments

California Public Utilities Commission and the People of the State of California (California)
Florida Public Service Commission (Florida)
Hamilton
HLAA, TDI, DHHCAN, NAD, ALDA Mill Neck Services, Inc., CPADO, AADB
Independent Telephone & Telecommunications Alliance (ITTA)
Kentucky Public Service Commission (Kentucky)
Miracom
National Association for State Relay Administration (NASRA)
National Association of Regulatory Utility Commissioners (NARUC)
Nebraska Public Service Commission (Nebraska)
Public Service Commission of the District of Columbia (DC)
Purple
Sorenson
Sorenson Paperwork Reduction Act Comments

2013 IP CTS FNPRM Reply Comments

Arizona Commission for the Deaf and the Hard of Hearing (ACDHH)
California
Hamilton

Public Service Commission of the State of Missouri (Missouri)
Sorenson
South Carolina Office of Regulatory Staff (South Carolina)
Sprint
Ultratec

IDT Petition Comments

Hancock, Jahn, Lee & Pucket, LLC, d/b/a Communications Axxess Ability Group and branded Star VRS and Star VRS for the DeafBlind (collectively, CAAG/Star VRS)
Sorenson
Sprint
TDI, NAD, DHHCAN, HLAA, ALDA, CPADO, Deaf Seniors of America, and CCASDHH
USTelecom
Voice on the Net Coalition (VON)

IDT Petition Reply Comments

Ad Hoc Coalition of International Telecommunications Companies (Coalition)
Convo Communications, LLC (Convo)
IDT Telecom, Inc. (IDT)

2017 TRS Rate Filing Comments

ClearCaptions, LLC (ClearCaptions)
Hamilton
Sprint
Sorenson

2017 TRS Rate Filing Reply Comments

IDT
Sprint

APPENDIX B

Final Rules

Part 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

1. The authority citation for part 64 continues to read as follows:

Authority: 47 U.S.C. 154, 202, 225, 251(e), 254(k), 403(b)(2)(B), (c), 616, 620, Pub. L. 104-104, 110 Stat. 56. Interpret or apply 47 U.S.C. 201, 202, 218, 222, 225, 226, 227, 228, 251(e), 254(k), 616, 620, and the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, unless otherwise noted.

2. Amend section 64.604 by revising paragraphs (c)(5)(iii)(D)(I) and (6), (c)(10), and (c)(13), and adding paragraph (c)(11)(v), to read as follows:

§ 64.604 Mandatory minimum standards.

* * * * *

(c) * * *

(5) * * *

(iii) * * *

(D) *Data collection and audits.* (I) TRS providers seeking compensation from the TRS Fund shall provide the administrator with true and adequate data, and other historical, projected and state rate related information reasonably requested to determine the TRS Fund revenue requirements and payments. TRS providers shall provide the administrator with the following: total TRS minutes of use, total interstate TRS minutes of use, total TRS investment in general in accordance with part 32 of this chapter, and other historical or projected information reasonably requested by the administrator for purposes of computing payments and revenue requirements. In annual cost data filings and supplementary information provided to the administrator regarding such cost data, IP CTS providers that contract for the supply of services used in the provision of TRS shall include information about payments under such contracts, classified according to the substantive cost categories specified by the administrator. To the extent that a third party's provision of services covers more than one cost category, the resubmitted cost reports must provide an explanation of how the provider determined or calculated the portion of contractual payments attributable to each cost category. To the extent that the administrator reasonably deems necessary, providers shall submit additional detail on such contractor expenses, including but not limited to complete copies of such contracts and related correspondence or other records and information relevant to determining the nature of the services provided and the allocation of the costs of such services to cost categories.

* * * * *

(6) *Audits.* The Fund administrator and the Commission, including the Office of Inspector General, shall have the authority to examine and verify TRS provider data as necessary to assure the accuracy and integrity of TRS Fund payments. TRS providers must submit to audits annually or at times determined appropriate by the Commission, the fund administrator, or by an entity approved by the Commission for such purpose. A TRS provider that fails to submit to a requested audit, or fails to provide documentation necessary for verification upon reasonable request, will be subject to an automatic suspension of payment until it submits to the requested audit or provides sufficient documentation. In the course of an audit or otherwise upon demand, an IP CTS provider must make available any relevant documentation, including contracts with entities providing services or equipment directly related to the provision of IP CTS, to the Commission, the TRS Fund administrator, or any person authorized by the Commission or TRS Fund administrator to conduct an audit.

* * * * *

(10) *IP CTS settings.*

Each IP CTS provider shall ensure that, for each IP CTS device it distributes, directly or indirectly:

- (i) The device includes a button, key, icon, or other comparable feature that is easily operable and requires only one step for the consumer to turn on captioning; and
- (ii) On or after December 8, 2018, any volume control or other amplification feature can be adjusted separately and independently of the caption feature.

(11) * * *

(v) IP CTS providers shall ensure that their informational materials and websites used to market, advertise, educate, or otherwise inform consumers and professionals about IP CTS include the following language in a prominent location in a clearly legible font: “FEDERAL LAW PROHIBITS ANYONE BUT REGISTERED USERS WITH HEARING LOSS FROM USING INTERNET PROTOCOL (IP) CAPTIONED TELEPHONES WITH THE CAPTIONS TURNED ON. IP Captioned Telephone Service may use a live operator. The operator generates captions of what the other party to the call says. These captions are then sent to your phone. There is a cost for each minute of captions generated, paid from a federally administered fund.” For IP CTS provider websites, the language shall be included on the website’s home page, each page that provides consumer information about IP CTS, and each page that provides information on how to order IP CTS or IP CTS equipment. IP CTS providers that do not make any use of live CAs to generate captions may shorten the notice to leave out the second, third, and fourth sentences.

* * * * *

(13) *Unauthorized and unnecessary use of VRS or IP CTS.*

(i) A VRS or IP CTS provider shall not engage in any practice that the provider knows or has reason to know will cause or encourage:

- (A) False or unverified claims for TRS Fund compensation;
- (B) Unauthorized use of VRS or IP CTS;
- (C) The making of VRS or IP CTS calls that would not otherwise be made; or
- (D) The use of VRS or IP CTS by persons who do not need the service in order to communicate in a functionally equivalent manner.

(ii) A VRS or IP CTS provider shall not seek payment from the TRS Fund for any minutes of service it knows or has reason to know are resulting from the practices listed in paragraph (c)(13)(i) of this section or from the use of IP CTS by an individual who does not need captions to communicate in a functionally equivalent manner.

(iii) Any VRS or IP CTS provider that becomes aware of any practices listed in paragraphs (c)(13)(i) or (ii) of this section being or having been committed by any person shall, as soon as practicable, report such practices to the Commission or the TRS Fund administrator.

(iv) An IP CTS provider may complete and request compensation for IP CTS calls to or from unregistered users at a temporary, public IP CTS device set up in an emergency shelter. The IP CTS provider shall notify the TRS Fund administrator of the dates of activation and termination for such device.

* * * * *

APPENDIX C

Proposed Rules

The Federal Communications Commission proposes to amend Title 47 of the Code of Federal Regulations as follows:

Part 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

1. The authority citation for part 64 continues to read as follows:

Authority: 47 U.S.C. 154, 202, 225, 251(e), 254(k), 403(b)(2)(B), (c), 616, 620, Pub. L. 104-104, 110 Stat. 56. Interpret or apply 47 U.S.C. 201, 202, 218, 222, 225, 226, 227, 228, 251(e), 254(k), 616, 620, and the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, unless otherwise noted.

2. Amend section 64.604 by revising paragraphs (c)(8)(ii), (c)(9)(x), (c)(10)(i), and (c)(11)(v), renumbering paragraph (c)(8)(v) as (c)(8)(vi) and paragraph (c)(10)(ii) as (c)(10)(iii), and adding paragraphs (c)(8)(v), (c)(9)(iii)(E), (c)(10)(ii), and (c)(11)(vi) to read as follows:

§ 64.604 Mandatory Minimum Standards.

* * * * *

(c) * * *

(8) * * *

(ii) An IP CTS provider shall not offer or provide to any other person or entity any direct or indirect incentives, financial or otherwise, to encourage referrals of potential users, registrations, or use of IP CTS. Where an IP CTS provider offers or provides IP CTS equipment, directly or indirectly, to a hearing health professional, or any other person or entity, and such person or entity makes or has the opportunity to make a profit on the sale of the equipment to consumers, such IP CTS provider shall be deemed to be offering or providing a form of incentive to encourage referrals of potential users, registrations or use of IP CTS.

* * * * *

(v) IP CTS providers, and their agents and contractors, may not discuss the availability of a free IP CTS device in marketing presentations and promotional materials unless such presentations and materials also clearly and prominently state that IP CTS and IP CTS devices are only intended for individuals who have a hearing loss that makes it difficult to use the phone.

(vi) Any IP CTS provider that does not comply with this paragraph (c)(8) shall be ineligible for compensation for such IP CTS from the TRS Fund.

(9) * * *

(iii) * * *

(E) Within two years after obtaining a consumer's self-certification, or within two years of the effective date of this paragraph (c)(9)(iii)(E), whichever is later, and within every two years thereafter, an IP CTS provider shall obtain a new self-certification from the consumer in accordance with the requirements of this paragraph (c)(9)(iii). Minutes of use of any consumer who has not provided a new self-certification by the end of the two-year period shall be deemed non-compensable, the provider shall be required to re-register the consumer for IP CTS service in accordance with the requirements of this paragraph (c)(9), and the IP CTS provider shall not be compensated for minutes of use associated with that consumer during the period of such lapsed registration.

* * * * *

(x) Each IP CTS provider shall maintain records of any registration and certification information for a period of at least ten years after the consumer ceases to obtain service from the provider and shall maintain the confidentiality of such registration and certification information, and may not disclose such

registration and certification information or the content of such registration and certification information except as required by law or regulation.

* * * * *

(10) *IP CTS Settings*. Each IP CTS provider shall ensure that, for each IP CTS device it distributes, directly or indirectly:

(i) The device includes a button, key, icon, or other comparable feature that is easily operable and requires only one step for the consumer to turn on captioning on or off;

(ii) The device shall not include any features that have the foreseeable effect of encouraging IP CTS users to turn on captions when they are not needed for effective communication; and

(iii) Any volume control or other amplification feature can be adjusted separately and independently of the caption feature.

* * * * *

(11) * * *

(v) IP CTS providers shall ensure that their informational materials and websites used to market, advertise, educate, or otherwise inform consumers and professionals about IP CTS includes the following language in a prominent location in a clearly legible font: “FEDERAL LAW PROHIBITS ANYONE BUT REGISTERED USERS WITH HEARING LOSS FROM USING INTERNET PROTOCOL (IP) CAPTIONED TELEPHONES WITH THE CAPTIONS TURNED ON. IP Captioned Telephone Service may use a live operator. The operator generates captions of what the other party to the call says. These captions are then sent to your phone. There is a cost for each minute of captions generated, paid from a federally administered fund. IP CAPTIONED TELEPHONE SERVICE IS NOT FOR EVERYONE WITH HEARING LOSS. In order to use captioning, a consumer must be able to certify that captioning is needed to hear telephone conversations. Other technologies, such as amplified telephones, may better serve a consumer’s need to hear telephone conversations.” For IP CTS provider websites, this language shall be included on the website’s home page, each page that provides consumer information about IP CTS, and each page that provides information on how to order IP CTS or IP CTS equipment. IP CTS providers that do not make any use of live CAs to generate captions may shorten the notice to leave out the second, third, and fourth sentences.

(vi) If an IP CTS provider knows or should have known that a user is deceased or no longer eligible to use IP CTS, including, but not limited to, a user failing to provide a new self-certification in accordance with the requirements of paragraph (9)(c)(iii)(E), the IP CTS provider shall either deactivate the captioning feature on the IP CTS equipment distributed to that consumer or reclaim the equipment, and minutes of use associated with the equipment shall not be compensable.

* * * * *

APPENDIX D

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980 (RFA),¹ as amended, the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) into the Further Notices of Proposed Rulemaking.² The Commission sought written public comment on the proposals in the *2013 IP CTS Reform FNPRM*, including comment on the IRFA.³ No comments were received in response to the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁴ A copy of the Report and Order, and FRFA (or summaries thereof) will also be published in the Federal Register.⁵

A. Need For, and Objectives of, the Rules

2. The Report and Order adopts an interim rate for Internet Protocol captioned telephone service (IP CTS) reflecting a weighted, cost-of-service methodology based on an analysis of providers' actual and projected costs. This approach places IP CTS compensation on a footing where provider compensation is more closely aligned with actual costs, as it is based on actual cost data for the provision of IP CTS instead of a proxy. The Commission believes that transitioning to this cost-based methodology from the current Multistate Average Rate Structure (MARS) plan methodology, that no longer reflects average reported costs, will enable it to set rates that compensate providers only for their reasonable costs of providing service, reduce waste of TRS Fund resources, and increase the assurance that TRS is made available in the most efficient manner. The adopted rate reflects average provider costs based on actual provider cost data collected by the TRS Fund administrator over the past few years.

3. In addition, the Commission directs the TRS Fund administrator to require IP CTS providers that contract for the supply of services used in the provision of TRS to include information about payments under such contracts classified according to the substantive cost categories specified by the administrator. The Commission believes taking this action will help address its concerns that some of the expenses incurred by IP CTS providers have not been reported in sufficient detail to enable the TRS Fund administrator to confirm their allowability and reasonableness.

4. The Report and Order also adopts three rule changes to facilitate the Commission's efforts to reduce waste, fraud, and abuse and improve its ability to efficiently manage the IP CTS program. First, the Commission prohibits linking volume control and captioning use on IP CTS devices so that users are not forced to turn on captioning if they simply want to turn up the volume. Second, the Commission requires IP CTS providers to include the following notifications in a clear and prominent location on their advertising brochures, websites, user manuals, and other informational materials and websites:

- IP captioned telephone service may use a live operator. The operator generates captions of what the other party to the call says. These captions are then sent to your phone.
- There is a cost for each minute of captions generated, paid from a federally administered fund.

The first part of the notification is not required from those IP CTS providers who do not use live communications assistants (CAs). Third, the Commission adopts a general prohibition against providing IP CTS to consumers who do not genuinely need the service. Specifically, IP CTS providers may not

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 13420, 13507-13, App. D (2013) (2013 IP CTS Reform FNPRM).

³ 2013 IP CTS Reform FNPRM, 28 FCC Rcd at 13491, 13507-13, para. 158, App. D.

⁴ See 5 U.S.C. § 604.

⁵ See *id.* § 604(b).

engage in practices that cause or encourage (1) the unauthorized use of TRS, (2) false or unverified TRS Fund compensation claims, (3) the making of TRS calls that would not otherwise be made, and (4) the use of TRS by consumers who do not need the service in order to communicate by telephone in a functionally equivalent manner. Providers that become aware of such prohibited practices must report them to the Commission or the TRS Fund administrator.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

5. No comments were filed in response to the IRFA.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

6. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁶ The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to which the Rules Will Apply

7. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rule changes.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹ A “small business concern” is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁰

8. The rules adopted in the Report and Order will affect obligations of IP CTS providers. These services can be included within the broad economic category of All Other Telecommunications. There are currently five providers that have received a certification to provide IP CTS: Hamilton Relay, Inc., CaptionCall, LLC (a wholly owned subsidiary of Sorenson Communications, Inc.), Sprint Corporation, ClearCaptions, LLC, and Mezmo Corporation d/b/a InnoCaption.

9. *All Other Telecommunications.* “All Other Telecommunications” is defined as follows: This U.S. industry is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or Voice over Internet Protocol (VoIP) services via client-

⁶ 5 U.S.C. § 604(a)(3).

⁷ *Id.* § 603(b)(3).

⁸ *Id.* § 601(6).

⁹ *Id.* § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). The statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” *Id.*

¹⁰ 15 U.S.C. § 632.

supplied telecommunications connections are also included in this industry.¹¹ The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less.¹² For this category, census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million.¹³ Thus, a majority of “All Other Telecommunications” firms potentially affected by the rules adopted can be considered small.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

10. The rule implementing a general prohibition against providing IP CTS to consumers who do not genuinely need the service and the requirement to separate volume control and captioning functions on IP CTS devices do not create direct reporting, recordkeeping or other compliance requirements on IP CTS providers.

11. In transitioning away from the MARS methodology for IP CTS, the Commission will require IP CTS providers to file annual cost and demand data reports with the TRS Fund administrator. There is no additional burden on IP CTS providers to file these reports, as IP CTS providers have been voluntarily submitting such reports to the TRS Fund administrator since 2011.¹⁴ The Commission has received approval to require the collection of such information pursuant to the Paperwork Reduction Act of 1995 (PRA),¹⁵ and the Commission is requiring the IP CTS providers to submit their cost and demand data for 2017.¹⁶ In addition, the Commission is requiring providers to supplement their cost data filings with information about payments made by providers to subcontractors for the provision of call centers, CA staffing, and other services by classifying such payments according to the substantive cost categories specified by the administrator. These requirements, which place minimal additional filing burdens on IP CTS providers, will be offset by the benefit to the TRS Fund and its contributors by the increased precision of calculating cost-based rates resulting from increased accuracy of TRS cost data submitted to the TRS Fund administrator.

12. The adoption of a requirement for IP CTS providers to include a notice on IP CTS websites and informational materials to inform consumers about the process, cost, and source of funding will place only a minimal burden on IP CTS providers. It will be offset by the benefit to the TRS Fund and contributors to the Fund resulting from the reduction of casual or inadvertent use of IP CTS that such notice may provide by educating consumers via multiple sources of information.

¹¹ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹² 13 CFR § 121.201; NAICS Code 517919.

¹³

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

¹⁴ See National Exchange Carrier Association, Inc. (NECA) TRS Fund Payment Formula and Fund Size Estimate, CG Docket No. 03-123, at 12, Exh. 3-6 (filed Apr. 29, 2011); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 11-12, Exh. 1-4 (filed Apr. 30, 2012); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 13-14, Exh. 1-4 (filed May 1, 2013); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 22-23, Exh. 1-4 (filed Apr. 30, 2014); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 17, Exh. 1-4 (filed Apr. 24, 2015); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51 at 19-20, Exh. 1-4 (filed Apr. 29, 2016).

¹⁵ Pub. L. No. 104-13, 109 Stat. 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

¹⁶ See OMB Control No. 3060-1249.

13. The requirement for providers that become aware of prohibited practices to report them to the Commission or the TRS Fund administrator should not be burdensome and is needed to prevent waste, fraud, and abuse of the TRS Fund.

F. Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

14. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁷

15. The interim rates for IP CTS will apply only to providers who are or may become certified by the Commission to offer IP CTS in accordance with its rules.¹⁸ The Commission adopts these interim rates to: (1) ensure that rates compensate providers for their reasonable cost; (2) reduce waste of TRS Fund resources and the amounts that TRS Fund contributors pay to the fund; and (3) ensure that TRS is made available to the extent possible and in the most efficient manner.¹⁹ The requirement to file cost and demand data annually will not increase the burden on IP CTS providers because they have been submitting such data to the TRS Fund administrator since 2011.²⁰ The Commission is requiring providers to supplement their cost data filings with information about payments made by providers to subcontractors for the provision of call centers, CA staffing, and other services by classifying such payments according to the substantive cost categories specified by the administrator. This requirement, which places minimal additional filing burdens on IP CTS providers, will be offset by the benefit to the TRS Fund and its contributors by the increased precision of calculating cost-based rates resulting from increased accuracy of TRS cost data submitted to the TRS Fund administrator.

16. Separating the volume control and captioning functions on IP CTS devices will place a minor burden on IP CTS providers and device manufacturers to reconfigure the functionality. Such costs will be offset from the likely decrease in waste and misuse of IP CTS, as individuals will be able to use a device's amplification features without also being required to use the device's captioning features. Providers are given six months after the effective date of the Report and Order to ensure that new and previously distributed devices are in compliance.

17. The general prohibition on practices resulting in IP CTS use by ineligible individuals, the requirement for providers that become aware of prohibited practices to report them to the Commission or the TRS Fund administrator, and the requirement for IP CTS providers to include notices on their informational materials and websites should not be burdensome and are necessary to combat waste, fraud, and abuse. These requirements will help ensure the efficiency of the TRS program, control the expenditure of public funds, reduce the amounts paid by contributors to the TRS Fund, and ensure the future viability of the TRS Fund and the provision of IP CTS.

G. Report to Congress

18. The Commission will send a copy of the Report and Order, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional

¹⁷ 5 U.S.C. § 603(b).

¹⁸ See 47 CFR § 64.606(a)(2)-(3), (b)(2).

¹⁹ See 47 U.S.C. § 225(b)(1).

²⁰ *Supra* note 14.

Review Act.²¹ In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

H. Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals

19. None.

²¹ See 5 U.S.C. § 801(a)(1)(A).

APPENDIX E

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the Further Notice of Proposed Rulemaking (FNPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadline for comments on the FNPRM provided in the item. The Commission will send a copy of the entire FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the FNPRM and the IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need For, and Objectives of, the Proposed Rules

2. In the FNPRM, the Commission proposes to adopt a multi-year cost-based compensation rate methodology for Internet Protocol captioned telephone service (IP CTS). The proposal will enable the Commission to transition the IP CTS rate toward the actual reasonable costs of providing the service based on provider cost data. To help ensure this objective, the Commission seeks comment on the reasonableness and allowability of certain provider costs; the specifics of setting a cost-based rate; alternative approaches; and the compensation rate for IP CTS using automatic speech recognition (ASR) without the assistance of a live communications assistant (CA). The Commission takes these steps to allow recovery of reasonable provider costs and ensure that IP CTS is provided in the most efficient manner.

3. The Commission proposes several different methods to restructure the funding and administration of IP CTS: (1) expanding the Interstate Telecommunications Relay Services (TRS) Fund base to include intrastate revenues; (2) permitting or requiring states to assume responsibility for the funding and administration of intrastate IP CTS and how to address the funding and administration of intrastate IP CTS for states that choose not to assume these duties; and (3) having assessments of user need for IP CTS performed under the purview of state TRS programs so that the assessments can be neutral, objective and independent from provider influence, or allowing or requiring IP CTS providers to obtain from new and existing IP CTS users a certification from an independent, third-party professional affirming the user's eligibility to use IP CTS.

4. The Commission proposes to include caregivers and other professionals within the scope of the prohibition of provider incentives to use IP CTS, and to include organizations along with individuals in the prohibitions of provider incentives.

5. The Commission proposes measures to ensure that accurate information about IP CTS is being imparted by providers to consumers, service providers and other members of the public. The importance of ensuring the accuracy of marketing information is heightened by use of IP CTS predominantly by seniors, as they may be particularly vulnerable to schemes that could result in waste, fraud, and abuse.

6. The Commission proposes to require IP CTS providers to biennially obtain from each user a self-certification of the user's continuing need to use IP CTS to achieve functionally equivalent telephone communications and to prohibit such providers from receiving compensation for IP CTS provided to any such individual who fails to re-certify within the specified interval or for calls associated with any device for which such certification was required. The Commission also seeks comment on whether to require providers to reclaim or disable any IP CTS devices that are no longer associated with

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ See *id.*

registered users. The Commission believes that these proposed requirements are needed to prevent unauthorized use of IP CTS devices and seeks comment on these proposals.

7. Finally, the Commission proposes to require providers to ensure that their IP CTS equipment provides an easy way to turn captions *on or off*, either before placing a call or while a call is in progress. Currently, the Commission's rules require IP CTS providers to ensure that any IP CTS telephones and devices they distribute, directly or indirectly, include a button, icon, or other comparable feature that is easily operable and requires only one step for the consumer to turn captioning on.

B. Legal Basis

8. The authority for this proposed rulemaking is contained in sections 1, and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 225.

C. Description and Estimate of the Number of Small Entities Impacted

9. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.⁴ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁶ A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁷

10. *Wired Telecommunications Carriers.* The U.S. Census Bureau defines this industry as "establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry."⁸ The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees.⁹ Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁰ Thus, under this size standard, the majority of firms in this industry can be considered small.

11. *Telecommunications Resellers.* The Telecommunications Resellers industry comprises

⁴ 5 U.S.C. § 603(b)(3).

⁵ *Id.* § 601(6).

⁶ *Id.* § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

⁷ 15 U.S.C. § 632.

⁸ U.S. Census Bureau, *NAICS Search*, <http://www.census.gov/cgi-bin/sssd/naics/naicsrch> (last visited June 21, 2017).

⁹ 13 CFR § 121.201 (NAICS Code 517110).

¹⁰ See U.S. Census Bureau, *American Fact Finder* (Jan. 08, 2016) http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table.

establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual network operators (MVNOs) are included in this industry.¹¹ The SBA has developed a small business size standard for the category of Telecommunications Resellers.¹² Under that size standard, such a business is small if it has 1,500 or fewer employees.¹³ Census data for 2012 show that 1,341 firms provided resale services during that year. Of that number, 1,341 operated with fewer than 1,000 employees.¹⁴ Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services.¹⁵ Of this total, an estimated 857 have 1,500 or fewer employees.¹⁶ Consequently, the Commission estimates that the majority of toll resellers are small entities.

12. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services.¹⁷ The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.¹⁸ For this industry, U.S. Census data for 2012 show that there were 967 firms that operated for the entire year.¹⁹ Of this total, 955 firms had employment of 999 or fewer employees.²⁰ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

¹¹ U.S. Census Bureau, *2012 NAICS Definition*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012> (last visited June 20, 2017) (NAICS 517911 Telecommunications Resellers).

¹² 13 CFR § 121.201 (NAICS code 517911).

¹³ See U.S. Census Bureau, *American Fact Finder* (Jan. 08, 2016), http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table.

¹⁴ U.S. Census Bureau, *American Fact Finder* (Jan. 08, 2016), http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table.

¹⁵ Fed. Comm'n's Comm'n, *Trends in Telephone Service*, 5-5, tbl. 5.3 (Sept. 2010) (*Trends in Telephone Service*), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

¹⁶ Fed. Comm'n's Comm'n, *Trends in Telephone Service*, 5-5, tbl. 5.3 (Sept. 2010) (*Trends in Telephone Service*), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

¹⁷ See U.S. Census Bureau, *American Fact Finder—About the Data*, <https://factfinder.census.gov/faces/affhelp/jsf/pages/metadata.xhtml?lang=en&type=ib&id=ib.en/ECN.NAICS2012.517210> (NAICS Code 517210).

¹⁸ 13 CFR § 121.201 (NAICS code 517210).

¹⁹ U.S. Census Bureau, *American Fact Finder* (Jan 08, 2016), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table (NAICS 51720, “Subject Series - Estab & Firm Size: Employment Size of Establishments for the U.S.: 2012”).

²⁰ U.S. Census Bureau, *American Fact Finder* (Jan 08, 2016), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table (NAICS 51720, “Subject Series - Estab & Firm Size: Employment Size of Establishments for the U.S.: 2012”). Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

13. *All Other Telecommunications.* “All Other Telecommunications” is defined as follows: This U.S. industry is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or VoIP services via client-supplied telecommunications connections are also included in this industry.²¹ The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less.²² For this category, census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million.²³ Thus, a majority of “All Other Telecommunications” firms potentially affected by the rules adopted can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

14. The proposed expansion of the TRS Fund base may require common carriers that provide only intrastate telecommunications service that are not currently registered with the TRS Fund administrator to register with the administrator and submit contribution payments to the TRS Fund.

15. The proposal to require or allow states to administer the IP CTS program or oversee IP CTS user eligibility may require states to provide additional information in their applications for certification to the Commission to indicate the role the state will undertake and include information concerning the state’s ability to take on this additional role.

16. The proposed third-party certification of IP CTS user eligibility would require IP CTS providers to obtain a copy of such certification from the user and retain the copy while the user is receiving IP CTS and for a minimum of ten years after the user has discontinued use of IP CTS.

17. The proposed marketing rules may require IP CTS providers to include specific information in IP CTS informational materials and on their websites. The proposal regarding biennial self-certification of IP CTS users would require providers to again collect and retain these self-certifications from the users. The proposal to require IP CTS providers to reclaim or disable IP CTS devices no longer associated with registered users may require IP CTS providers to notify users of the need to return the devices when no longer using them and may require the providers to keep records associated with the device reclamation or disabling process.

18. The proposal to require providers to ensure that their IP CTS equipment provides an easy way to turn captions *on or off*, either before placing a call or while a call is in progress would not create direct reporting, recordkeeping or other compliance requirements.

E. Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

19. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather

²¹ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

²² 13 CFR § 121.201; NAICS Code 517919.

²³

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.²⁴

20. If the Commission were to expand the TRS Fund base to include intrastate revenue, small entities that provide only intrastate telecommunications service may be burdened by the need to register with and submit payment to the TRS Fund administrator. However, such burdens would be offset by the benefits of appropriately funding the provision of IP CTS, and the IP CTS program, including the providers and users, will benefit from the broader contribution base.

21. If the Commission adopts the proposal to transfer the administration of IP CTS to the states or the proposal to allow states to verify user eligibility, either proposal may affect small entities because IP CTS providers may need to be certified in each state and submit additional information to state IP CTS programs. However, small entities may also see their burdens reduced because state TRS programs, rather than the small entities, would take on the obligation of user eligibility verification.

22. If the Commission were to require IP CTS providers to request users to obtain certifications from independent third-party professionals, this would add a step to the user registration process. However, this additional step appears to be needed to prevent waste, fraud, and abuse of a federal program and is already voluntarily being done by some IP CTS providers without the providers finding it burdensome to obtain such third-party certifications.

23. Ensuring that accurate information about IP CTS is being imparted by providers to consumers and other members of the public, such as hearing health professionals and caregivers, appears to be necessary to further the Commission's efforts to reduce waste, fraud, and abuse and improve the Commission's ability to efficiently manage the program. If the Commission were to adopt such prohibitions, it may impose a small burden on IP CTS providers, including small entities, by requiring the inclusion of specific information on IP CTS providers' informational materials and websites.

24. The proposed requirements for IP CTS providers to biennially obtain self-certifications from consumers and to reclaim or disable IP CTS devices that are no longer associated with registered users appear to be necessary to further the Commission's efforts to reduce IP CTS waste, fraud, and abuse and improve the Commission's ability to efficiently manage the program. The burdens on IP CTS providers, including small entities, to notify users to re-register biennially and to reclaim or disable IP CTS devices are minimal and would be offset by the improved efficiency in administering the program.

25. The Commission proposal to require providers to ensure that their IP CTS equipment provides an easy way to turn captions on or off, either before placing a call or while a call is in progress would appear not to impose any ongoing burden on IP CTS providers, including small entities, because the rule already requires inclusion of a button, key, or icon to turn captions on. The only apparent burden on IP CTS providers, including small entities, would be the possible need to implement software upgrades or other such changes so that a consumer can turn captions off. This rule change appears to be necessary to limit waste, fraud, and abuse of the TRS Fund.

26. Finally, the FNPRM seeks comment from all interested parties. Small entities are encouraged to bring to the Commission's attention any specific concerns they may have with the proposals outlined in the FNPRM. The Commission expects to consider the economic impact on small entities, as identified in comments filed in response to the FNPRM, in reaching its final conclusions and taking action in this proceeding.

F. Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals

27. None.

²⁴ 5 U.S.C. § 603(b).

**STATEMENT OF
CHAIRMAN AJIT PAI**

Re: *Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket No. 13-24; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123*

Today, we take up reform of a service called Internet Protocol Captioned Telephone Service, or IP CTS. This service makes a meaningful difference in the daily lives of many Americans with hearing loss. IP CTS allows people who can speak but have difficulty hearing over the telephone to both read captions and use their residual hearing to understand a phone conversation. IP CTS users can complete everyday tasks like scheduling appointments without depending on others to make telephone calls for them. They can call to keep up with friends and family and avoid social isolation. And they can conduct business calls and remain in the workforce.

But this critical service is at risk. Use of IP CTS—which is paid for entirely through the FCC’s Telecommunications Relay Services (TRS) Fund—has grown exponentially in recent years. In fact, annual IP CTS minutes of use have gone up more than 12-fold from 2011 to 2017, and IP CTS now represents almost 80% of the total minutes compensated by the TRS Fund. At the same time, the Fund’s contribution base has been shrinking—by about one-third over the past decade.

Several years ago, I invoked Stein’s Law to describe this situation. Stein’s law holds that if something cannot go on forever, it will stop. Herbert Stein, the law’s progenitor, suggested that an unsustainable trend would end of its own accord. But when it comes to federally sponsored programs, an agency may be compelled by circumstance to make the trend stop. This is such a case. We must act to ensure the sustainability of IP CTS for the millions of Americans with hearing loss who depend on it.

That’s exactly what we are doing here, at long last.

For example, we set interim IP CTS compensation rates that will bring those rates closer to average provider costs. This move will make IP CTS more cost-effective and save the TRS Fund nearly \$400 million over the next two years. We also adopt rules to limit unnecessary IP CTS use. To preserve service for those who need it, we must reduce use by those who do not. So we adopt a general prohibition on providing IP CTS to ineligible users. We establish rules to help avoid the costly generation of captions when the user only needs to turn up the volume on his or her IP CTS device to communicate effectively. And we require IP CTS providers to include notifications in their informational materials to help prevent casual or inadvertent use of the service.

To ensure that the service keeps up with the times, we also take an important step toward modernizing IP CTS in light of technological advances. Specifically, we allow service providers to use fully automated speech recognition (ASR) to generate captions. At the same time, we make clear that providers using ASR must meet the Commission’s minimum TRS standards.

Looking to the future, we seek comment on measures to improve the compensation, funding, and structure of the IP CTS program, including by expanding the TRS Fund contribution base, as well as ways to address IP CTS marketing and other provider practices that may encourage use of the service by people who don’t need it. We also ask for public input on how to ensure service quality for IP CTS users, including through IP CTS performance goals and metrics.

And stepping back from these details, we should always remember the bottom line on all these reforms and proposals: we are aiming for an IP CTS framework that stretches scarce federal dollars as far as possible to meet the needs of Americans with hearing loss.

This item would not have been possible without the work of our dedicated and talented FCC staff. Thank you to Bob Aldrich, Sue Bahr, Eliot Greenwald, Michael Scott, Karen Strauss, and Patrick Webre of the Consumer & Governmental Affairs Bureau; Terry Cavanaugh, Valerie Hill, Rick Mallen, Linda Oliver, and Bill Richardson of the Office of General Counsel; Sharon Lee and Traci Randolph of the

Enforcement Bureau; Andrew Multz and David Schmidt of the Office of Managing Director; and Chuck Needy of the Office of Strategic Planning & Policy Analysis.

**STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY
APPROVING IN PART AND CONCURRING IN PART**

Re: *Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket No. 13-24; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123*

Innovation has transformed all parts of the communications sector, bringing consumers the benefits of new services, more choices, and lower prices. The Telecommunications Relay Service (TRS) program and the consumers that use it have also benefited from these developments, as services have moved to IP and new features have been added. Internet Protocol Captioned Telephone Service (IP CTS) is no different. For example, service providers have begun incorporating Automatic Speech Recognition technology, which holds the promise of faster and more accurate call transcription for a fraction of the cost, allowing us to target valuable TRS funding to those who need it most.

As TRS services change with the times, so too must the Commission's approach to regulating them. The record demonstrates that the Multistate Average Rate Structure (MARS) methodology is not producing reasonable rates, so the Commission appropriately explores alternative approaches. The difficulty with cost-based rates, however, is that they require systems of accounting and review that can be burdensome for providers and overseers alike. It also requires the Commission to determine which costs are allowable. Having spent much time on these same issues in the universal service rate-of-return proceeding, I am well aware of the complexity and have understood the desire by some companies to move away from legacy structures.

Here, I suggested – and I am not the first by any means – that the Commission explore the use of a reverse auction in lieu of rate regulation. There are several ways a reverse auction could be designed, including to allow multiple providers to offer service at competitively set rates. This could avoid the need for more burdensome cost showings and auditing. I thank the Chairman and my colleagues for agreeing to revise the circulated draft to include this concept. We need to seriously consider this approach going forward.

I also want to ensure that TRS users and contributors to the program can benefit from innovation occurring outside its traditional bounds. Growth in IP CTS minutes has substantially increased the size of the TRS Fund, but the item notes that many users – 80 percent according to one filing – could communicate effectively using other technologies, such as amplified telephones, instead of IP CTS. We simply cannot expect consumers to keep funding at the levels needed to cover the growth rate of this program, especially when there are alternative options available that do not require funding from the TRS program, including texting and other messaging apps. I have heard the argument that some elderly users may not be comfortable with such services. However, new users that enter the program as they begin to experience hearing loss may have more experience, and higher comfort level, with messaging services. Therefore, I am pleased the draft item has been revised to include a section seeking comment on the extent to which other technologies that do not require TRS funding could benefit users and reduce the use of IP CTS resources.

The portion of the item that continues to give me enormous angst, however, is the legal authority provided for expanding the base of TRS contributors. Anchored in sound policy and in the law, I have pressed the Commission to declare that broadband, VoIP, and text messaging are interstate, information services. IP CTS, in my view, would fall into this same category. Relying on a strained interpretation of the statutory term “generally” in order to assess intrastate providers is not necessary and others may attempt to use it to undermine unrelated Commission proceedings. Instead, we can get to the same outcome under my approach and avoid really problematic lines of thinking in the process.

I am also extremely troubled by the options for implementing such an expansion. I recently wrote in a blogpost that the notion of jurisdictional separations is increasingly anachronistic in an IP

driven app economy. The universe of providers subject to this type of legacy accounting has been shrinking fast, and with the Commission's full blessing. I am leery of giving it new life in this proceeding. I hope that, as the service continues to evolve, this legacy approach will be overtaken by events and the Commission will reconsider its thinking.

I vote to approve in part and concur in part.

**STATEMENT OF
COMMISSIONER BRENDAN CARR**

Re: *Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket No. 13-24; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123*

The FCC has an obligation to ensure that telecommunications services are available to Americans with hearing loss. One way we do that is through the funding of IP CTS, which is a service that allows an individual who can speak, but who has difficulty hearing over the telephone, to use a phone and an IP-enabled device to simultaneously listen and read captions of the phone conversation.

The Commission's TRS Fund, which subsidizes the cost of IP CTS, serves vitally important purposes. It helps ensure that Americans with hearing loss do not lose out on the connectivity essential to contacting friends and family, calling for help in an emergency, or accessing employment opportunities.

In my time on the Commission, I have had the chance to meet with IP CTS providers and visit their call centers. I have spoken with dedicated call center employees, many of whom relayed stories of their own family members with hearing loss, and they pointed to them as their inspiration for entering this field of work. And I have heard from consumers who benefit from IP CTS.

Recognizing the significant role IP CTS plays in the hearing loss community makes it all the more important that we ensure the program is available for those who need it. But both the record here and my own experience indicates that scarce program dollars may be supporting at least some calls for which the parties do not need captions. So I am glad that we are launching this proceeding to help ensure that the limited funding continues to support calls for those Americans that rely on captions to communicate.

In this respect, I want to thank my colleagues for agreeing to seek comment on additional steps that could help identify and remedy the potential misuse of program dollars. Among other things, we now seek comment on whether IP CTS providers should require or enable their employees to flag instances where the captioning capability is turned on—and thus the call is being paid for out of the Fund—but the callers are not relying on the captions to communicate. These and other potential reforms we tee up can help ensure that support remains available and continues to flow to individuals with hearing loss.

It's important we act now, given the trends we're seeing in the program. Support for IP CTS is projected to cost nearly \$1 billion in 2018 alone, which is up from \$400 million in 2016. And while the costs of providing IP CTS have declined drastically over the past several years, the rates charged by providers have grown by a significant margin. This trend is unsustainable. So I welcome today's decision to bring compensation levels for IP CTS providers down to a closer approximation of their costs. I agree with our decision to more clearly greenlight the use of Automatic Speech Recognition, or ASR, technologies, which can be a more cost-effective and reliable way of generating captions. And I support Commissioner O'Rielly's request to seek comment on other alternative technologies that might assist individuals with hearing loss without cost to the Fund.

Finally, I want to acknowledge my colleagues' willingness to add a new section to the Further Notice that seeks comment on additional steps we might take to ensure call quality when IP CTS is used to dial 911. Given the often exigent circumstances present during such calls, I am glad that we are now developing a record on whether there is more we should do to ensure reliable 911 access.

Thank you to the staff of the Consumer and Governmental Affairs Bureau for your work on this item. It has my support.

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL
CONCURRING**

Re: *Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket No. 13-24; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123*

Under the Americans with Disabilities Act, functional equivalency has been at the heart of our telecommunications relay service policies. Functional equivalency may sound like the kind of regulatory lingo that only a lawyer could love. But for millions of Americans with hearing and speech impairments it means they have the right and ability to pick up the phone, reach out and connect, and participate more fully in the world.

In the United States, the ranks of the hard-of-hearing are growing. This country's Baby Boomers began to reach 65 in 2011. As a result, the total estimate of those with hearing loss nationwide is now nearly 50 million.

For those Americans with hearing difficulties, the FCC's Internet Protocol Captioned Telephone Service (IP CTS) can make a big difference. It allows those with some residual hearing to use their own voice to speak during a call but then read captions on their device when the called party responds. This means that people with hearing loss can do the things that so many of us take for granted—picking up the phone and seeking emergency help; securing a job; making a doctor's appointment; following up with a child's teacher; and connecting with family and friends.

But the IP CTS program is under stress. It is growing fast and needs attention. It needs a smart pathway forward.

For these reasons, this rulemaking is timely. But the approach here is backwards. It puts the cart before the horse by introducing automatic speech recognition into the IP CTS program before we address our most basic regulatory responsibilities.

I believe it makes sense to include automatic speech recognition in our framework under the Americans with Disabilities Act. Technology has advanced and it may be possible for automated systems to substitute for traditional IP CTS, which requires human intervention through communications assistants. This is exciting. It may yield an experience for users that is comparable to older forms of IP CTS and delivers true functional equivalency under the law. But inexplicably, the FCC authorizes automatic speech recognition today but puts off for the future figuring out at what rate providers will be compensated and what service quality standards hard-of-hearing users can expect. Can we acknowledge that if functional equivalency is our mandate, we should be doing these things right here and now at the same time that we authorize the service?

While I support the outcome here, I believe our analysis comes up short. I concur.